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ABSTRACT

This practicum was designed to improve creative problem-solving skills in children through the use of career concepts. Although the full program was developed for youngsters in grade three through six, this project exposed fifth and sixth graders at the Northside School, Levittown, New York to the Career Awareness Program for a period of weeks. This Program was infused into the present curriculum. An investigation was then conducted to determine the extent to which these classrooms had made gains in the skills of creative problem-solving, compared to those in the control group. The data shows that the gain scores for the experimental students were significantly better than those for the control students in three of the four scales of the Torrance Tests of Creative Thinking (Fluency, Flexibility, and Elaboration). In the elaboration scale (which is identified in this study as the scale most closely related to creative problem-solving), gain scores for females were significantly higher than those for males. The complete curriculum guide for grades three through six is appended. Objectives and lesson plans are color coded for each grade level. (Author/CJ)

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CAREER AWARENESS:

One Means for Meeting the Changing Role of Education

by Rose Mary P. Auteri

Submitted in partial fulfillment of the requirements for the degree of Doctor of Education, Nova University.

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The author first became interested in developing "creative problem-solving" through a Career Awareness Program while she was a doctoral candidate at Nova University, Fort Lauderdale, Florida. This interest generated the title, CAREER AWARENESS: One Means for Meeting the Changing Role of Education, as the topic for this Maxi II.

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ABSTRACT

This practicum, Career Awareness: One Means for Meeting the Changing Role of Education, was designed to improve creative problem-solving skills in children through the use of career concepts. Fifth- and sixth-grade students at the Northside School, Levittown, New York, were exposed to a Career Awareness Program for a period of seventeen weeks. This Program was infused into the present curriculum. The materials for this Program were developed by the Northside Career Awareness Curriculum Committee and were published as a "Career Education Guide."

An investigation was then conducted to determine the extent to which these four classes had made gains in the skills of creative problem-solving, compared to the four classes in the control group.

The data shows that the gain scores for the experimental students were significantly better than those for the control students in three of the

four scales of the Torrance Tests of Creative Thinking (Fluency, Flexibility, and Elaboration). In the elaboration scale (which is identified in this study as the scale most closely related to creative problem-solving), gain scores for females were significantly higher than those for males.

The pattern of results in the various scales of the Torrance Tests of Creative Thinking (TTCT) permits the generalizations that active intervention with this Career Awareness Program improves creative problem-solving skills in fifth- and sixth-grade students in this Socio Economic Status community; and that greater gain scores are achieved by females than by males.

Plans for further action will center upon the curriculum implications noted in this study. Specifically, teacher recommendations for changes in the guide will be implemented. Further study will then be initiated to determine teacher influence in the development of creative problem-solving skills.

INTRODUCTION

Career Awareness: One Means for Meeting the Changing Role of Education has become a national priority for American education. Societal and technological changes, changing patterns of work and worker roles, accompanying changes in values, and unmet needs of youth, as well as a lack of educational relevance for youth, have stimulated the current emphasis on career education.

Many students exit from our educational system without the skills necessary for their successful pursuit of happiness in their chosen life roles. One example of a basic skill needed is an awareness and understanding through "creative problem-solving" of (a) who one is, in terms of his/her own unique capacities, abilities, interests, and attitudes as he/she relates to others; (b) the performance skills involved in solving the problems of interpersonal relationships intrinsic to the world of work; (c) the relationship of one's education to the understanding and determination of one's life role; and (d) the wide range of ever-changing career choices available. Therefore, this study proposes that career education should be founded on the belief that these needs are best met by using career components while teaching the skill of creative problem-solving.

In an attempt to create something significantly different and cause an appreciable change in the offerings at the Northside School in Levittown, the career awareness curriculum was developed; and a pilot study program was infused into the regular program. The nature of the design and scope of involvement were measured and analyzed to determine if the creative problem-solving skills which were presented would produce significant gains in the experimental group.

This Career Awareness Program implied a program of meaningful student learning experiences which resulted from (a) a planned blending of teaching-learning experiences; (b) guidance-counseling activities; (c) ongoing evaluation activities; (d) supportive career information; (e) rigorous instruction in the skill of creative problem-solving; (f) school-community involvement; and (g) related staff development activities for the dissemination of information to district personnel. A coordinated system, comprised of the above components, facilitated an articulate curriculum for this Career Awareness Program.

CHAPTER I

STATEMENT OF PURPOSE

The purpose of this practicum was to help students develop better skills in creative problem-solving. This was to be accomplished by exposing the pupils of two fifth- and sixth-grade classes of the Northside School, Levittown, New York, to 128 hours of a career awareness curriculum infused into the regular school program between November, 1974, and March, 1975. The two experimental groups were compared to two control groups according to pre-post test gains on tests of creative problem-solving.

Need

The author, as principal of the Northside School for the past six years, and her colleagues had become aware of the need for an additional dimension in the curriculum offerings--one which would provide for the development of more effective creative problem-solving skills in our children. Through their daily involvement with children, teachers had identified a general lack of skills in creative problem-solving. These deficiencies were reflected in the day-to-day solutions of educational and social problems and were demonstrated by children's inability to call into play appropriate skills for given situations. It had been noted, specifically, that, in an exercise of creative writing, children showed a general lack of ability to think of and organize new ideas and/or to express them in an imaginative way. In the area of mathematics, a lack of creative problem-solving skills was recognized in children's inability to select relevant solution principles and to try new approaches when the first one failed. In the area of science, poor competence in creative problem-solving skills showed up in the way children related to and identified the problem, generated a hypothesis, conceived an experimental method, and evaluated the outcomes of the experiment. Other indications of the need to develop creative problem-solving skills in children at the Northside School were children's lack of ability to search for insightful concepts to explain events in social studies; and a general lack of open-mindedness to see situations from other points of view.

It was the belief of the staff and this administrator that the level of creative problem-solving skills in our children was falling short of their potential for creative problem-solving. Since the ability to solve problems creatively becomes increasingly important in light of the pace of social change; since creative problem-solving is central to the educational process; since satisfactory decision-making and problem-solving processes are important to an individual's continuous growth and development and to his/her eventual career choice and on-the-job performance, it became critical for us to respond to the need to correct the kind of curriculum offerings currently available to children in our school. In short, what was needed at the Northside School was a program which provided experiences for practicing the skills of creative problem-solving.

The use of career concepts and objectives as a vehicle for providing the needed experiences for practice in creative problem-solving is appropriate in light of the current literature, which describes a clear rationale for its use:

- Occupations can be described in terms of required kinds of problem-solving performance.[1]
- Success in school depends upon involvement, relevance, and on a problem-solving approach. These are integral with good education of all sorts and career education especially.[2]
- Career education challenges the concept that the basic function of the school is transmission of knowledge. However, this does not negate the importance of providing a base of knowledge and skills to support an individual's preparation for a career and to enable him to deal effectively with the problems that confront him.[3]
- Young people approach occupational decision-making with a narrow and often unrealistic choice field. We can ready youth to cope with occupational choice, and this training can and should begin

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[1] Larry J. Bailey and Ronald W. Stadt, Career Education: New Approaches to Human Development, Bloomington, Illinois: McKnight Publishing Co., 1973, p. 227.

[2] Ibid., p. 43.

[3] Ibid., p. 377.

in the early years of his/her elementary schooling.[4]

Definition of Terms

Career Awareness is defined as that curriculum designed and developed to provide creative problem-solving experiences oriented towards developmental career choice.

Problem-Solving is defined as a process of becoming sensitive to problems and deficiencies; identifying the difficulty; searching for solutions, making guesses, or formulating hypotheses about the deficiencies; testing and retesting these hypotheses and possibly modifying and retesting them; and, finally, communicating the results.[5] Problem-solving can further be defined as the ability to change one's approach to a problem; to come up with ideas that are both relevant and unusual; and to redefine the problem or some part of it.[6]

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[4] R. L. Gibson, Career Development in the Elementary School, Columbus, Ohio: Merrill Publishing Co., 1972, p. 3.

[5] E. Paul Torrance, Norms-Technical Manual: Torrance Tests of Creative Thinking, Personnel Press/Ginn and Company, 1974, p. 8.

Problem-Solving is Creative to the extent that one or more of the following conditions are met:

- The product of the thinking has novelty.
- The thinking is unconventional.
- The thinking requires high motivation and persistence.
- The problem as initially posed was vague and undefined so that part of the task was to formulate the problem itself.[7]

Behaviors that Identify Creative Problem-Solving Skills are observable in the cognitive and affective realms. The observable cognitive behaviors of pupils are identified by Torrance as "fluency, flexibility, originality, and elaboration."[8] Demonstrated pupil behaviors, according to F. E. Williams, are curiosity, risk-taking, complexity, and imagination."[9]

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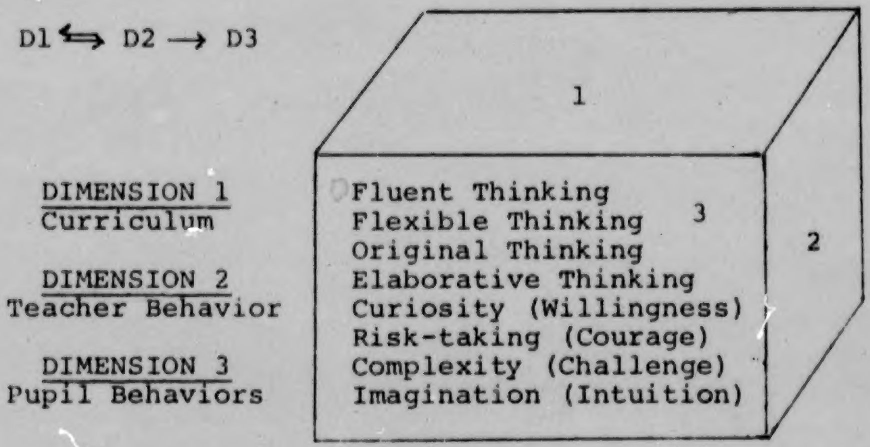
[6] Richard De Mille, "The Creativity Boom," Teachers College Record, 65, No. 3, December 1963, 42.

[7] Torrance, op. cit., p. 10.

[8] Ibid.


D1 ⇆ D2 → D3
DIMENSION 1
Curriculum
DIMENSION 2
Teacher Behavior
DIMENSION 3
Pupil Behaviors
1
2
3
Fluent Thinking
Flexible Thinking
Original Thinking
Elaborative Thinking
Curiosity (Willingness)
Risk-taking (Courage)
Complexity (Challenge)
Imagination (Intuition)

Infusion is defined as injecting the present classroom with experiences in creative problem-solving. These experiences are specifically designed to help the student develop occupational readiness, become oriented to occupational options, and prepare for a satisfying and productive career through career choice.

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[9] F. E. Williams, "A Total Creativity Program for Individualizing and Humanizing the Learning Process," Educational Technology, 2, 1972, 86.

Choice " . . . is a process rather than an event."[10]

Career Choice is defined as a "developmental process which requires the development of basic attitudes, understandings, and adjustment techniques as a foundation for future occupational educational planning and decision-making."[11]

Decision-Making is defined as "those skills which are involved in the process of seeking information, considering alternatives and consequences, and deciding in terms of success probability."[12]

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[10] Donald E. Super, The Psychology of Careers, New York: Harper & Row Publishing Co., 1957, p. 184.

[11] Robert Gibson, Career Development in the Elementary School, Columbus, Ohio: Merrill Publishing Co., 1972, p. 25.

[12] R. D. Hosford and A. S. Briskin, "Changes Through Counseling," Review of Educational Research, 39, No. 2, 1951, 195.

Limitations

The study has certain limitations:

1. The study does not control for the limitations in the teaching styles or creative abilities of teachers participating in the program (experimental or control), nor the classroom climate generated in any of the groups. The program of intervention is administered by teachers who have volunteered to participate in the program, and not by teachers selected because of particular teaching styles, creative abilities, or classroom climate.

2. Generalizations arrived at are limited to the population described.

3. Creative problem-solving is limited to one measuring instrument.

4. The total amount of time provided for the administration of this program of intervention is a very small part of the child's school experience. The generalizations reached are limited to

the time factor described in the design of this study.

CHAPTER II

REVIEW OF RELATED LITERATURE AND RESEARCH

Need for Change: What the Critics Say

American education has always had its critics. From time to time, people within and without the profession of education, ranging from the irresponsible to the honestly sincere, have assessed schools and found them wanting.

McNally and Passow predicted in 1960 that the future course of American education would depend upon five issues to be resolved. One pointed issue identified is "shall the schools concentrate on a curriculum of basic, relatively unchanging subject matter, or shall we continue to make significant curriculum changes designed to adapt education to a rapidly changing world?"[13]

Proposals of responsible critics of today's schools were categorized by McNally and Passow into four classifications: (a) education's neglect of the individual; (b) the schools' failure to maintain standards; (c) the lack of priorities on important learnings; and (d) the schools' failure to use the most effective organization and methods of instruction.[14]

---

[13] H. J. McNally and A. H. Passow, Improving the Quality of Public School Programs, New York: Teachers College Press, 1960, p. 22.

In "Who Needs Schools," J. H. Fischer states: "We are in the beginning stages of a sweeping redefinition of the purposes and functions of education in our society."[15] He points out that, if all of the children of all of the people are to be educated, the idea that there need not be school is an idle one.[16]

The number of professionals who defend the public schools has greatly diminished. The number of critics has even more greatly increased. An analysis of literature on educational criticism is a task larger than can be accomplished. However, a gross grouping of criticism serves as an outline for evidence of the need for change.

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[14] Ibid., p. 16

[15] J. H. Fischer, "Who Needs Schools," Saturday Review, 1970, p. 38.

[16] Ibid., p. 91.

Purpel and Belanger (1972) deal with " . . . three central themes of educational criticism--knowledge, school-society, and person."[17] The overemphasis of abstract knowledge and de-emphasis of the arts of the practical have left the curriculum reform movement of the 1960's open to justifiable charges. Larry J. Bailey states that there are almost no remaining critics of education who submit coolly that curriculum should consist of organized disciplines alone.[18] It appears that critics who advocate discipline studies exclusively and for their own sake are soon to be, if they are not already, extinct.

Present concern for important learnings is better understood by analysis of the meanings of knowledge in curriculum. Z. Lamm identifies three formulae for important learning: "(1) Knowledge is meant for use; (2) Knowledge has intrinsic value; and (3) Knowledge is a means in the process of individualization."[19]

---

[17] Curriculum and the Cultural Revolution, ed. by D. E. Purpel and M. Belanger, Berkeley, California: McCutchan Publ., 1972, p. 485.

[18] Ibid., p. 486.

According to Lamm, instruction is seen as a bridge between knowledge and the learner; instruction mediates between knowledge and the learner. Knowledge is laws and models of behavior, and the learner lacks discipline until he has knowledge. Because of this common denominator, most schools use both the disciplinary and instrumental approaches to instruction. Critics propose that internalization and conditioning are thought to be justified because one has voids of knowledge.[20]

Most critics now make more basic challenges to the structure of schooling. In the extreme, contemporary critics recommend altogether new relationships between school and society.

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[19] Z. Lamm, "The Status of Knowledge in the Radical Concept of Education," Curriculum and the Cultural Revolution, ed. by D. E. Purpel and M. Belanger, Berkeley, California: McCutchan Publ., 1972, p. 124.

[20] Ibid., p. 125.

Critics of present-day schooling define important learnings in a way compatible with personal growth and development. For example, C. Gattegno supports the notion that knowledge is not something which exists prior to learning. Rather, knowledge should be a consequence of learning. Gattegno says that "learning, not teaching, should be the concern of schooling." His thesis is that "because children have eyes, professionals should aid their seeing by clearing out the rubbish and pointing them in the right direction."[21]

Unlike most of the critics who have been cited thus far, Ivan Illich provides guidelines in an ideal system. " . . . there should be no obstacle for anyone at any time of his life to be able to choose instruction among hundreds of definable skills at public expense."[22] It should be noted that his proposal for achieving equality of opportunity, respecting individual intiative and interest, and relating to technology and the workaday world, is possible via career education.

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[21] C. Gattegno, What We Owe Children: The Subordination of Teaching to Learning, New York: Outerbridge and Dienstfrey, 1970, p. 98.

Ivar Berg, in 1971, and Paul Goodman challenge the commonly held conceptions regarding the present schooling's relationship between education and employment.[23] According to Berg and Goodman, there is strong evidence that schools have little effect on citizenship and vocational ability because schooling has so many negative results and because tutelage is against nature and arrests growth. Their conclusion is that formal schooling should be drastically reduced.[24]

Implications from the foregoing review of the critics are that our present schooling has problems and that these problems initiate change. To respond to the critics' concerns, the problem of schooling must address itself to (a) contemporary concern for individual students and equality of education and other life opportunities; (b) contemporary conceptions of knowledge, storage, and retrieval systems and the value of practical and applied versus theoretical and purely academic pursuits; (c) evidence of concern for young, black, female, and other "target" groups; and (d) complaints about the non-connectedness of school and society.

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[22] I. Illich, Deschooling Society, New York: Harper & Row, 1970, p. 14.

[23] I. Berg, Education and Jobs: The Great Training Robbery, New York: Praeger Publishers, 1970, p. 102.

[24] P. Goodman, New Reformation: Notes of Neolithic Conservative, New York: Random House, 1970, p. 79.

Educational leaders and influential people in government and industry submit that career education is a proper bridge between youth and responsible adulthood, *i. e.*, between discontent and the human problem of creative problem-solving for human potential.

Need for Change: Why Career Education

In the *1972-73 Occupational Outlook Handbook*, Secretary of Labor James D. Hodgson states, "Eight out of ten jobs to be filled during the 1970's will be open to people who have not completed four years of college. But more job training will be required of young people in the 1970's as industrial process, technology, and business procedures increase in capacity."[25] According to Hodgson, the best employment opportunities exist for business machine servicemen, construction, machine operators, stewardesses, receptionists, electronic computer operators, and cashiers. Since few of these job skills are taught in formal educational institutions, it would appear that the United States is still subject to an academic bias in the schools.

Further, Theodore W. Schultz, in "Rise in the Capital Stock Represented by Education in the United States, 1900-1957," points out that, although only 16,000 out of any cohort class of 100,000 persons in the fifth-grade class today will graduate from a four-year college, nearly all courses and programs in our schools are designed as though all the students will complete college.[26] This suggests the lack of relevance in our present system of education and a need for reassessment.

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[25] John W. Kenrick, Productivity Trends in the United States, Princeton, New Jersey: Princeton University Press, 1974, p. 79.

Because schooling has become somewhat alien to the working-world content, organization in career education will depend upon pedagogical and administrative decisions and may thus differ from content as it exists in the workaday world itself. However, unless these differences can be understood, the preparation of specialists will be nominally effective.

Career education is a response to the life needs of individuals. K. B. Hoyt says, "Basically, we are talking about the fact that in this country we need to have people who want to work, who are prepared to work, and who actively regard work as a meaningful and important part of their lives."[27] Its concept is to focus learning and ancillary services of public education on individuals' career development, i.e., on the occupational information, self-understanding, preparation, placement, and continuing education.

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[26] Theodore W. Schultz, "Rise in the Capital Stock Represented by Education in the United States, 1900-57," Economics of Higher Education, ed. by Selma Mysikin, Washington, D. C., 1962, p. 29.

Career education challenges the concept that the basic function of the school is transmission of knowledge. However, this does not negate the importance of providing a base of knowledge and skills to support an individual's preparation for a career and to enable him to deal effectively with the problems which confront him; for example, what bodies of knowledge are the most important? How do we develop a truly interdisciplinary curriculum? These questions are basic to the design of a curriculum for career education.

Even though social change has not been as dramatic as technological change and large-scale curriculum modifications have come on the scene several decades after planned change, the need for planned change in education has long been accepted. Lifton concludes that there is a tremendous lag between schooling and available resources, i.e., that schools have been greatly resistant to change.[28]

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[27] K. B. Hoyt, Excerpts of speech given before Teacher Education Department, American Vocational Association, Washington, D. C.: American Vocational Association Convention Proceedings Digest, 1971, p. 39.

The past is bleak. The future can be bright only if systematic change becomes ubiquitous in education. Fortunately, there is already a large body of literature on change in education. In relatively recent times, the theory and practice of planned change in education has matured to the point of being generally and widely applicable.

However, restructuring means modifying and reorganizing a total system. This is a more fundamental level of change. Restructuring is basic to social change. The present curricular system, therefore, must be restructured to give career development its own place on the main trunk rather than a "tack-on-catch-as-catch-can" or a tangential place.

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[28] W. M. Lifton, "Planning for Tomorrow," Education for Tomorrow, ed. by W. M. Lifton, New York: John Wiley, 1970, p. 56.

According to Donald Super, young people just out of school average eight job changes per year, and data on school dropouts indicates even greater occupational uncertainty.[29] Such mobility is not only frustrating and wasteful to most individuals and society but is indicative of the importance of job satisfaction to the individual and job performance to the employer.

Such data suggests the need for a career development program that provides a richer and deeper background for career anticipation and decision-making. Such a program should ultimately reduce the "chance" factor in job selection and at the same time assist the individual in developing on-the-job adjustment and learning techniques.

Robert L. Gibson states that the formative years in the elementary school can make a major contribution to the implementing of this concept, and a planned program of career development is the vehicle for this implementation.[30]

---

[29] Donald E. Super, op. cit., p. 184.

The national implications should not be ignored. Any program which assists the individual in realizing his potential is, in a very direct manner, contributing to human resource development and manpower utilization in America.

Career Development: Its Relevance to the Educational Enterprise

Jerome Bruner calls the term "relevance" a "thumbworn symbol in the modern debate about the relation of education to man and society."[31] Bruner's insightful response to "Relevance to What?" points out that there is a vast change needed in our thinking about school, about growth, and about the assumption of responsibility in the technological world as we know it.

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[30] Robert L. Gibson, Career Development in the Elementary School, Columbus, Ohio: Charles E. Merrill Publishing Co., 1972, p. 4.

[31] J. S. Bruner, The Relevance of Education, New York: W. W. Norton, 1971, p. 114.

Bruner's conception of relevance highlights the role of intention and goal directedness in learning and the acquisition of knowledge; and the conversion of skill into the management of one's own enterprises. The objective, according to Bruner, " . . . is to produce skill in our citizens. Skill in the achieving of goals of personal significance, and of assuring a society in which personal significance can still be possible."[32]

Similarly, few would dispute that much of what was offered as relevant education was nothing more than old remedies in new terms. Journals in subject matter fields, such as the sciences and humanities, and process-oriented fields, such as guidance, were replete with nothing more than shallow disguises for content which the authors had long since determined should be taught. The problem of relevance suggests that too few professionals focused on learning rather than on teaching.

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[32] Ibid., p. 115.

Beck points out that ultimately it is the individual who determines what is relevant to his life.[33] As Burns and Brooks point out, educators must admit that most educational experiences are not relevant to the lives of students.[34]

Current literature on relevance implies that the American educational enterprises shall never again be permitted:

> (1) complacency with the dualism of traditional goals for those who achieve in spite of schools, and mediocre vocational education for those who do not achieve but choose to stay;
>
> (2) satisfaction with the submission that the home and inner-city or rural environments are to blame for nonlearners;
>
> (3) ignorance of the indulgences of unemployed young adults in drugs, crime, and other diversions;

---

[33] C. E. Beck, Education for Relevance, New York: Columbia University Press, 1968, pp. 233-248.

[34] R. W. Burns and G. D. Brooks, "The Need for Curriculum Reform," Educational Technology, 10, 1970, 8-12.

(4) forgetfulness of the fact that learning capacities and more essential features of human existence may be realized at levels beyond all imagination in school which are sensitive to the human condition;

(5) ignorance of the successes which Cohen and Filipczak (1971), Silberman (1970), Glasser (1969), Leonard (1968), and others reflect;

or

(6) assurance that other institutions will not assume the formal schools' functions if it continues its traditional course.[35]

Concluding that relevance means "solving my problems" and hastening to point out that each person solves his own problems, education is left with the same concern which ushered in the relevance era: With what problems of what individuals should the educational enterprise be concerned?

Only a few, such as Feldman, had argued that education should be relevant to modern technology and unemployment.[36]

---

[35] L. J. Bailey and R. W. Stadt, op. cit., p. 42.

Glasser's Schools Without Failure voices objection to determinism, which was the life and bequest of the relevance era. He states:

> I do not accept the rationalization of failure commonly accepted today that young people are products of a social situation that precludes success. Blaming their failure upon their homes, their communities, their culture, their background, their race, or their poverty is a dead end for two reasons: (1) it removes personal responsibility for failure, and (2) it does not recognize that success is potentially open upon involvement, relevance, on a problem-solving approach. These are integral with good education of all kinds and career education especially.[37]

In a milestone article, "End of the Impossible Dream," Peter Schrag submits that we should have learned in the 1960's that " . . . there is no magic in the single school system or in any set of curricular prescriptions," and that "the most successful motivating device may simply be the sense that one has chosen what he wants to learn and under what conditions."[38]

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[36] M. J. Feldman, "Making Education Relevant," Contemporary Thought on Public School Curriculum, ed. by E. C. Short and G. D. Marconnit, Dubuque, Iowa: William C. Brown, 1968, p. 37.

[37] W. Glasser, Schools Without Failure, New York: Harper & Row, 1969, pp. 4-5.

In the mid-1970's, hopefully, a career curriculum will include an occupational awareness, orientation, exploration, and preparation for careers as central rather than peripheral in the curriculum. Regardless of school-leaving age, individuals should possess saleable entry skills and have the opportunity to return without stigma to the educational enterprise for instruction which will advance them in career development.

American public education is based on the very simple assumption that intervention (*i.e.*, schooling) during the formative years of childhood and adolescence prepares individuals for adulthood and various and sundry roles in society. The rationale is predicated on the belief that expansion of career education in the school will require both implementation and understanding on the part of teachers and administrators regarding the vocational development aspect of growth and learning.

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[38] P. Schrag, "End of the Impossible Dream," *Saturday Review*, 53 (39), 1970, 68-70.

Career Development: Classification of Theories

Theories in career development are relatively new in a profession that is itself in a "period of its development roughly analogous to that of adolescence."[39] Even so, productive and innovative research and theorizing are increasing rapidly. Career development is a high priority item on the national as well as on the international scene.

The International Association for Education and Vocational Guidance (IAEVG),[40] for example, is establishing open lines of communication between countries for counseling and guidance of personnel in career development. In England, books are being published, and research programs are developing modules on teaching and decision-making.[41]

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[39] Joseph S. Zaccaria, Theories of Occupational Choice and Vocational Development, Boston: Houghton Mifflin, 1970, p. ix.

[40] Barrie Hopson and John Hayes, Career Guidance, London: Heinemann, 1972, p. 65.

Most career development theories are somewhat tentative and only partially research-based. Overly enthusiastic use of these theories is as inappropriate as is complete rejection. It is understood by this investigator that career development theories should not be a general theory of education but rather should be incorporated with sound educational theories, thus helping to develop a comprehensive rationale for career education.

In 1972, Herr and Cramer developed a classification of existing career development theories into five broad areas.[42] It should be pointed out that the following classifications may be combined to explain most theories in career behavior:

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[41] Barrie Hopson and Patricia Hough, Careers Teaching Program, Department of Psychology, The University of Leeds, 1971, p. 42.

[42] Edwin L. Herr and Stanley H. Cramer, Vocational Guidance and Career Development in the Schools: Toward a Systems Approach, Boston: Houghton Mifflin, 1972, p. 39.

(1) Trait-and-factor or actuarial emphasis. This theory focuses upon personal "traits" such as aptitudes and interest, and their relation to traits required by the job.

(2) Decision-making emphasis. In this theory the individual chooses, along the lines of concepts derived from decision theory, the vocational alternatives that offer the best return or "payoff."

(3) Sociological emphasis. Sociological factors such as one's social group and the social structure exert influence on vocational development and choice.

(4) Psychological emphasis. Development-and-choice theory depends, to a large extent, upon the individual's psychological makeup, e.g., motivation, personality structure, and needs.

(5) Developmental emphasis. Theories in this group go beyond the previous ones in focusing on the development of the individual over a relatively long period of time.[43]

John O. Crites also developed a similar classification system of career theories. However, his classification system includes accidental and economic theories. The latter is related to economic theories of supply and demand, while the former includes chance and contingency factors. Chance factors are those that are unplanned and unexpected, while contingency factors are those whose effects are predictable, i.e., " . . . intelligence and socio-economic status . . ."[44]

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[43] Ibid., pp. 54-55.

The classifications used by Crites are quite similar to those used by Herr and Cramer and are based on major themes of the various career theories.

Crites' review of the literature on theories of career development identified the following theorists as belonging in each classification:

> Developmental: Super, Ginzberg, and Tiedeman are major representatives of this approach. Others whose work fits into this category are Beilin, Flanagan, Crites, Gribbons, and Samler.
>
> Needs: Roe, Holland, and Hoppock are the principal spokesmen for this approach, although the importance of needs is acknowledged in the statements of all theorists.

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[44] John O. Crites, Vocational Psychology, New York: McGraw-Hill, 1969, p. 79.

> Psychoanalytical: Bordin. Nachmann, Segal, and Galinsky are perhaps best known for this approach.
>
> Sociological: Miller and Form, Hollingshead, and Blau are well known for their theories in this area.
>
> Decision-making: Gelatt, Hilton, and Hershenson and Roth consider decision-making central to the approach. Programs such as the College Entrance Examination Board's SCOPE and DECIDING and the American College Testing Program's Career Planning Program make extensive use of decision-making techniques.
>
> Existential: Very little specifically focusing on career development has been written from this point of view. Some authors, such as Simon and Standley, used this approach exclusively, although much of existential psychology, as it relates to choice, achievement, and fulfillment of potentialities, inevitably touches upon career development.[45]

Some of the authors identified above are described in enough detail, in this study. to provide an understanding of their development and content. With this background, it is possible to build a framework for additional reading, make some applications to daily work, compare theories, and relate them to practices in career awareness curriculum programs.

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[45] Ibid., p. 80.

Career Development: Theories of Occupational Choice

In 1951, the research team of Ginzberg, Ginsburg, Axelrad, and Herma published the first comprehensive theory of vocational behavior in the United States--or what they called "a preliminary approach to a general theory."[46] This group was influenced by the English investigators Buehler and Lazarsfield. Buehler and Lazarsfield's study of "life stages" had a direct influence on current American theories. The theory of life stages (growth, exploration, establishment, maintenance, and decline) was to serve as a framework for the organization of data concerning vocational choice and adjustment. A person's vocational development, as well as other aspects of his life, was assumed to fit into this same developmental pattern.[47]

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[46] E. Ginzberg, S. W. Ginsburg, S. Axelrad, and J. L. Herma, *Occupational Choice: An Approach to a General Theory*, New York: Columbia University Press, 1951, pp. 169-176.

In the Ginzberg General Theory of Occupational Choice, researchers established generalizations about the types of occupational choices made before and after college. They concluded that the process of occupational decision-making could be analyzed in terms of three developmental periods: fantasy period, tentative period, and realistic period.

The first is referred to as the fantasy period. During this time (ages six to eleven) a child thinks about an occupation in terms of his wish to be an adult and tries out a variety of adult situations by make-believe work roles.

The tentative period, the second stage (ages eleven to seventeen), is characterized by the recognition of the problem of deciding on a future occupation. This period is further divided into four stages. The "interest stage" (ages approximately eleven to twelve) is the time when the pre-adolescent begins to select activities primarily in terms of likes and interest. In the "capacity stage" (ages twelve to fourteen) the individual begins to evaluate his ability to function in areas in which he is interested. In the "value stage" (ages approximately fifteen and sixteen) the adolescent becomes aware of the range of factors related to a particular occupational preference and evaluates them in terms of his own goals and values. Finally, during the "transition stage" (which is usually at the age of seventeen) the individual begins to shift from subjective factors--interests, capacities, and values--to reality conditions.

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[47] Larry J. Bailey and Ronald Stadt, op. cit., p. 66.

Finally, the realistic period begins at age eighteen and continues throughout adulthood.[48]

The significance of Ginzberg's research in the 1950's is that occupational choice is not a single decision, but a developmental process which takes place over a minimum of six or seven years and, more typically, over ten or more years.

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[48] Ibid.

The final element of the Ginzberg theory states that the process of occupational choice ends in a compromise. During the years leading up to choice, the individual attempts to achieve a balance between a series of subjective elements--interests, capacities, values--and the opportunities and limitations in the real world.

However, a restatement of Ginzberg's original theory appeared in the Vocational Guidance Quarterly in 1972.[49] The reformulated theory has grown out of two decades of research in manpower economics, much of which has been focused on the occupational problems of disadvantaged populations.

There were three major elements in Ginzberg's original theory of 1951:

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[49] E. Ginzberg, "Toward a Theory of Occupational Choice: a Restatement," Vocational Guidance Quarterly, 20, 1972, 172.

> (1) Occupational choice . . . is a decision-making process that extends from pre-puberty until the late teens or early 20's when the individual makes a definitive occupational commitment.
>
> (2) Many educational and other preparatory and exploratory decisions along the way have the quality of irreversibility.
>
> (3) The resolution of the choice process always ends in a compromise, since the individual seeks to find an optimal fit between his interests, capacities, and values and the world of work.[50]

His reformulated theory of 1972 states that:

> (1) Occupational choice is a process that remains open as long as one makes and expects to make decisions about his work and career.
>
> (2) While the successive decisions that a young person makes during the preparatory period will have a shaping influence on his later career, so will the continuing changes that he undergoes in work and life.
>
> (3) People make decisions about jobs and careers with an aim to optimizing their satisfactions by finding the best possible fit

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[50] E. Ginzberg et al., op. cit., pp. 169-176.

> between their priority needs and desires and the opportunities and constraints that they confront in the world of work.[51]

It should be recognized that while Ginzberg still acknowledges that the previous educational and occupational decisions have a cumulative effect on an individual's future occupational prospects, he now holds that it was wrong to see these decisions as having an irreversible impact. Further, for the purpose of this study it should be recognized that Ginzberg's theory of choice supports the need to present situations which will develop the decision-making process, through the grades, as a developmental skill.

Literature suggests that Ginzberg's revision in 1972 may have been due to Donald Super's Developmental Self-Concept theory. Super criticized Ginzberg's theory of occupational choice because it failed "to take into account the continuity of the development of preferences and of the differences in the stages, choices, entry and adjustment; it (should) explain the process through which interest, capacities, values, and opportunities are compromised."[52]

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[51] E. Ginzberg, loc. cit.

In 1954 Donald Super sketched the main elements of a theory of career development from a dozen elements: occupational ability; individual differences; identification with parents and the role of models; life stages; career patterns; development that can be guided; development as the result of interaction; dynamics of career patterns; job satisfaction; and work as a way of life.

Super organized the above-mentioned diverse elements into a summary statement of a comprehensive theory. In order to test his theoretical model he began a long-term research project entitled the Career Pattern Study.[53]

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[52] Donald E. Super,"A Theory of Vocational Development," American Psychologist, 1953, p. 187.

[53] Donald E. Super, "Career Patterns as a Basis for Vocational Counseling," Journal of Counseling Psychology, 1, 1954, 12-20.

The concept of career development, as used by Super,[54] led to a completely new set of behavioral definitions. For example, the term "vocational choice,' borrowed from psychology, conveyed a misleading notion of neatness and precision of time and of singleness and uniqueness in the life of an individual. According to Super's definition, "choice is, in fact, a process rather than an event."[55]

Super's definition of "choice" is applied to this study because, as Super maintains, a person selects an occupation in which the requirements provide a role consistent with his self-image.

Although this study does not investigate self-image, it is necessary to point out that the processes by which the self-concept is developed are identified as the processes of formation, translation, and implementation. According to Super and others, the process of forming a concept of self begins in infancy. "This is essentially an exploratory process which goes on throughout the entire course of life . . ."[56] Thus, as the individual copes with the decision-making and adjustment tasks, a self-concept emerges and assumes a greater influence on subsequent decisions.

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[54] Donald E. Super et al., Vocational Development: A Framework for Research, New York: Teachers College Press, 1957, p. 42.

[55] Donald E. Super, The Psychology of Careers, p. 184.

P. M. Blau's research and literature agrees with Ginzberg and Super when he states that "Lest the complicated and extended developmental process that culminates in occupational choice be oversimplified, it is necessary to consider it as a series of interrelated decisions rather than a single choice."[57]

Other investigators of theory in occupational choice such as Gustad, Jessor, Parnes, and Wilcock, have proposed what they call a "conceptual framework" rather than a theory of occupational choice and selection. Theory, they explain, is concerned with the interconnection between direct and remote determinants, while the function of a conceptual model is to call attention to different kinds of antecedent factors and the exact relationship to be demonstrated through research.[58]

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[56] D. Super, R. Strishevsky, N. Matlin, and J. P. Jordan, Career Development: Self-Concept Theory, Princeton, New Jersey: College Entrance Examination Board, 1963, p. 11.

[57] P. M. Blau, J. W. Gustad, R. Jessor, H. S. Parnes, and R. C. Wilcock, "Occupational Choice: A Conceptual Framework," Industrial and Labor Relations Review, 9, 1956, 4.

R. P. O'Hara outlines a theoretical approach which views career development as a learning process. According to O'Hara, all vocational learning is a function of motivation. The student acts to satisfy his vocational needs; for example, the conscious choice of courses relates to a future occupational goal and is the result of an understanding of the intimate relationship between education and occupation.

The essence of O'Hara's approach is that the career development of students can be facilitated by involving them in various learning situations which have occupational implications. "If we teach the students to make increasingly more adequate vocational differentiations and integrations, then our theory says that the result will be more adequate vocational responses."[59]

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[58] Ibid.

According to Miller and Form, " . . . potential for control is the major advantage of a learning theory approach as cited by O'Hara."[60] Therefore, it is proposed by theorists that, in order that career development learning take place, a proper learning environment is required. The explanatory element of the learning theory approach to career decisions is based on knowledge of the individual's past history, current stimulus situation, and present motivational status. Manipulation of the environment under the control of the teacher or parent thus becomes possible. As a result of increased control of the environment, changes in student behavior become more predictable.

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[59] R. P. O'Hara, "A Theoretical Foundation for the Use of Occupational Information in Guidance," Personnel and Guidance Journal, 1968, p. 640.

[60] D. Miller and W. Form, Industrial Sociology, New York: Harper & Row, 1951, p. 18.

Another type of theory, referred to as the decision-making theory, is becoming increasingly apparent in professional literature. H. B. Gelatt's theory has been selected for detailed analysis because it illustrates the nature of the general approach and applies to the work of this study. The theory is actually designed as the basis for an approach to counseling; but it serves very well to illustrate the cyclical process of decision-making in career development, the effect of past experiences, and the relationship of immediate, intermediate, and distant decisions.

Decision-making, according to Gelatt's theory, begins with a purpose or objective.[61] The individual is aware that he needs to make a decision, that he needs information, and that he has at least two possible courses of action. For example, if he is trying to decide whether to enroll in a training program in mechanical work, he needs information about his mechanical aptitudes, interests, and abilities, as well as descriptions of the programs at the career center.

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[61] H. B. Gelatt, "Role of Subjective Probabilities in Decision Process," Journal of Counseling Psychology, 14, No. 4, 1967, 332-341.

Utilization of this data is central to the process. The next strategy would involve an evaluation of the desirability of each outcome. Which does he value most? Which one enables him to be what he wants to be? In the final step, he selects a specific major area.

The individual's prediction system determines the way he looks at possible and probable outcomes, as well as the alternatives he will consider.

Estimating possible outcomes and probabilities makes heavier demands on the individual's prediction system. Past experiences of success, the self-concept, and the level of aspiration enter the process. He may predict too optimistically, too pessimistically, or quite accurately. The individual's prediction system may be ineffective or efficient in relation both to the data selected and to the weights used.

Finally, according to Gelatt, a decision is made. It may be either "terminal" or "investigatory." From either type there is feedback into the decision-making loop; the suitability of the decision is assessed by tryout, or further investigation is planned. Both of these courses of action provide new data for decision-making. The cyclical process is more or less continuous. The individual may be at different stages of different problems at any given time. Each decision changes or adds to the available data for the next one.

Gelatt has not developed all aspects of the model and mentions specifically that value and utility need further clarification. Also, some other concepts, such as risk, need to be incorporated. However, many relevant concepts are included, i.e., assessing the value of alternative choices and the subjective probability or likelihood that each can be attained; maximizing expected value in decision-making; and sequential decision-making.[62]

The final general approach worthy of mentioning comes from Joseph Simons' writings. He has attempted to point out that the literature of existential philosophy has produced a meaningful theory of career development. A central tenet of existential philosophy is that career choice is the key decision that will largely determine an individual's personality.[63]

It is well to conclude by reasserting that the existing theories of career behavior are somewhat lacking when evaluated against rigorous criteria of formerly adequate theories. However, the issue is not whether to accept the theories, but rather how to apply knowledge of the theories to the solution of career education.

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[62] Arthur H. Brayfield and John O. Crites, "Research on Vocational Guidance: Status and Prospect," Man in a World at Work, ed. by Henry Borow, Boston: Houghton Mifflin, 1964, p. 311.

[63] Joseph B. Simons, "An Existential View of Vocational Development," Personnel and Guidance Journal, 44, 1966, 604-610.

Curriculum Framework: A Synthesis of Career Development Principles

Robert M. Worthington appears to have incorporated career education principles for basic concepts in a career curriculum framework. He states:

> Career Education is a revolutionary approach to American education based on the idea that all education experiences, curriculum instruction, and counseling should be geared to preparing each individual for a life of economic independence, personal fulfillment, and an appreciation for the dignity of work. Its main purpose is to prepare all students for successful and rewarding lives by improving their basis for occupational choice, by facilitating their acquisition of occupational skills, by enhancing their educational achievements, by making education more meaningful and relevant to their aspirations, and by increasing the real choices they have among the many different occupations and training avenues open to them.[64]

Worthington stresses that "Career Education recognizes the critical decision points when students must be prepared and equipped to decide whether to pursue a job or further education; or some combination of both work and formal study."[65] With this in mind, curriculum framework should be looked at as a "lifelong" systematic way of acquainting students with the world of work in their total school experience; and it should prepare them to enter into and advance in a career field of their own choosing.

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[64] R. M. Worthington, "The Implications of Career Education for Adult Education in the United States," paper presented at the Third UNESCO International Conference on Adult Education, Tokyo, Japan, 1972, p. 3.

There is no reason to believe that in the seventies, and afterward, the role of the curriculum will diminish. Indeed, the curriculum future educators develop will need to be increasingly efficient, so that it can be understood and can help students become aware of appropriate behavior in the decision-making process.

To date, curriculum specialists in career education have been content to develop teaching resource guides which consist primarily of suggested classroom activities and recommended commercial curriculum materials. These activities are, for the most part, loosely organized supplemental instructional units, emphasizing lower-level cognitive behaviors. These activities are not only inadequate to develop the behaviors required for self-understanding, career decision-making, and preparation for employment; they are also serious indictments of career education professionals' lack of familiarity with curriculum development principles. It is anticipated that in and through the efforts of this research a sincere effort will be made to include effective curriculum development fundamentals.

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[65] Ibid., p. 4.

It is the conviction of this author that the curriculum is the product of the educator's mind and all that went into his own development of intelligent behavior. It is his heritage and his gift to tomorrow; moreover, it is the unique evidence of his tenure in the oldest and most honorable of all professions.

Curriculum Framework: A Synthesis of a General Conceptual Career Model

Every curriculum development effort potentially involves thousands of decisions. Many are of trivial, routine nature and go almost unnoticed. Others have far-reaching effects and may either build restraints into the system or enhance operational "degrees of freedom."[66] Therefore, some type of conceptual framework is required to help this study see the entire process, understand the complexities of decisions, and assure that certain considerations are not under- or over-emphasized. Such a framework should be designed to aid careful planning, continual examination, revision, growth, and successful implementation.

R. A. Emans provides a rationale for a conceptual model when he states:

> A conceptual framework may be thought to be analogous to a system of lighthouses at sea. It does not tell where to go or restrict movement, but it is

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[66] H. Grobman, Developmental Curriculum Projects: Decision Points and Processes, Itasca, Illinois: Peacock, 1970, p. 106.

> necessary to guide movement and warn of the danger spots. American education may be at a point where advance in practice will not come about without a conceptual framework which takes account of all the forces within the curriculum.[67]

The description of a general conceptual career model parallels the curriculum development procedures. For a general curriculum model which is, first, sophisticated enough to guide curriculum development regardless of level, subject area, philosophy, or specific type of curriculum; and, secondly, reflective of the reality of how curriculum actually evolves in developmental curriculum projects, the model should contain five phases in overall structure.

The five major phases for any general model are:

I Selection of the Curricular Language
II Formation of Goals and Objectives
III Preparation of Instructional Products

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[67] R. Emans, "A Proposed Conceptual Framework for Curriculum Development," The Journal of Educational Research, 59, 1966, 327.

IV Experimental Tryout, Evaluation and Quality Control

V Defusion and Adoption

A model should also contain objectives and goals. Early in 1971, the Division of Vocational and Technical Education prepared a conference discussion paper for career education for the seventies, which is worthy of note. This document, which could be applicable to a general conceptual model, is a challenge to all educators. Starting with the assumption that education should be "lifelong for each person," this paper presents six objectives of career development:

- To provide every young person who completes high school with a saleable skill and assured entry into further education or training.
- To provide those students who leave high school before graduation with a saleable skill and re-entry opportunities into education or training.
- To provide career orientation, starting in kindergarten, and guidance, counseling, and placement services to all students at all levels of education to assist them in career choices and in making job changes.

- To assure every person the opportunity to obtain career-related skills throughout life, within or outside of schools, with employers assuming a greater role.
- To emphasize and enlarge post-secondary and adult vocational and technical education programs, including pretechnical programs for the academically handicapped; so that a much higher proportion of specific skills training will occur at the post-secondary level.[68]

Five goals for a model were also presented:

- Vocational education must become part of the educational experience of all people.
- Vocational education must be more responsible to the nation's present and future employment needs.
- Private schools and private industry must be an integral part of career education.
- Vocational education is the principal element of a career education program from Kindergarten to adulthood.
- Leadership development is essential to effect career education.[69]

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[68] E. L. Rumpf, Vocational Education for the 1970's, Washington, D. C.: Division of Vocational and Technical Education, 1971, p. 2.

[69] Ibid., p. 3.

As identified in the above-stated objectives and goals, a career education model has its antecedents in "life adjustment" and other approaches to making education meaningful. But it is different in the sense that it is seen as a response to problems accentuated by the economically and socially disadvantaged; to mobility conditions in the world of work; to accumulated knowledge of personal development and the career component of self-concept specifically; and to problems of schooling itself.

Curriculum Framework: Definitions and Conclusion

This researcher recognizes that development and growth of the individual's career behavior, specifically through a career awareness program which stresses creative problem-solving, relates to the definition of career education. This is stated by Larry J. Bailey:

> o Career education refers to educational programs and curriculums at many different developmental levels, and provided by several types of delivery systems, which provide experiences designed to help individuals

> become oriented to, select, prepare for, enter, become established, and advance in an individually satisfying productive career. Basic to the concept of career education is the recognition that preparation for a career role must begin in early childhood if the individual is to develop the concepts, attitudes, and skills which insure freedom of choice and expand career options. Career education eliminates artificial distinctions between "general" and "vocational" education by fusing the two in a manner which enables the student to better solve personal, social, and career related problems.
>
> o Career development is a term used to describe the accumulation of individual behaviors related to work, both before and after entry into an occupation. It is a developmental, continuously iterative process which progresses from infancy throughout adulthood like an expanding spiral. In curricular terms, career development refers to the behavioral outcomes of career education, primarily those related to self-development; career planning and decision-making; and work attitudes, values, concepts, and skills.[70]

Many observers of career education have expressed concern regarding the absence of a simple and all-inclusive definition of career education. Authors have attempted to shed some light on this concern. Selected definitions of career education have been discussed by Herr, Goldhammer, and Taylor; by Hoyt, Evans, Making and Mangum. It is obvious that career education has been defined as a program, a concept, and a process. Examples clarify differences.

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[70] Larry J. Bailey and Ronald W. Stadt, Career Education: New Approaches to Human Development, Bloomington, Illinois: McKnight Publishing Co., 1973, p. 346.

Career education as a program has been defined in terms of alternate types of delivery systems (e. g., school, employer, home-community, and rural-residential based); in terms of level (e. g., awareness, orientation, exploration, preparation, specialized education); and in terms of curriculum components (e. g., work experiences, occupational information, study of technology).

As a concept, career education has been defined in terms of theory and rationale (e. g., economic self-sufficiency, self-actualization, preserving freedom of choice, and expanding available career options).

As a process, career education has been described in terms of observable student behavior (e. g., development and implementation of a self-concept, acceptance of responsibility for career planning, understanding of the American economic system, and development of employable skills).

Whereas all of these usages are technically correct, the authors reviewed prefer to differentiate more clearly between career education--which they regard as a concept and a program--and career development, which is more properly used to describe an individual's career behavior.

After a review of much of the related literature, there is a significant realization that career education and many of the types of change which are recommended by prominent educational critics and theorists are compatible. Further, the basic unifying purpose of most authors was, first, to demonstrate that career education has identifiable antecedents which are systematically interrelated and well-founded in substance and rationale; and, secondly, to orient curriculum developers to purposes, goals, and objectives of career education.

This author views the future of career education with considerable optimism. Kenneth Hoyt puts this well: "I see no way right now that we could impede this movement called 'career education,' even if we wanted to. It is too popular a concept."[71]

It is apparent, therefore, that educators must come rather naturally to the realization that career development must be the core--the major thread--of education in a society which is so well advanced technologically that it endangers the human condition.

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[71] Kenneth B. Hoyt, R. N. Evans, E. F. Making, and G. L. Mangum, _Career Education: What It Is and How to Do It,_ Salt Lake City, Utah: Olympus Publishing Co., 1972, p. 95.

CHAPTER III

PRACTICUM DESIGN

Population

Setting: Levittown, New York, has a total population of 59,286, which extends over 5.9 square miles, according to the 1970 census.[72]

Kenneth Cynar, Director of the Taxpayer Information Bureau, states that there are 124 housing units with a median price range of $33,000.[73] The median family income is $13,083.[74] The ethnic background is predominantly Irish Catholic; and it is almost exclusively an all-white community.

The major occupation of the fathers in this community is civil service, *i. e.*, firemen and policemen.

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[72] *Nassau County Data Book*, Carle Place, New York: Nassau Planning Commission, June 1974, p. 182.

[73] Kenneth Cynar, Director of Taxpayer Information Bureau, 240 Old Country Road, Mineola, New York.

[74] *Nassau County Data Book*, Table 24, p. 152.

The family unit in Levittown consists of a growing number of families with only one parent in the home.

The elementary and secondary school cluster reflects a homogeneous enrollment because of its unique socio-economic level and ethnic grouping.

The Northside Elementary School, from which the population of this study is taken is one of eleven elementary schools and five junior-senior high schools in the system. The total school district population is approximately 16,500[75]

The Northside School houses grades three to six, with an enrollment of 750 children. Two primary schools feed into Northside; and Northside, in turn, feeds into a large junior-senior high school.

Subjects: The career awareness curriculum was administered to two fifth- and two sixth-grade classes in the Northside School from November, 1974, through March, 1975. These classes constituted the experimental group.

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[75] *Ibid*., p. 160.

The four classes in the experimental group were selected because of the willingness of the teachers to participate in the program.

The control group consisted of two fifth- and two sixth-grade classes. The classes were selected at random from the remaining five sections on each grade level. In the original formation of classes, children were selected at random from heterogeneous groupings.

The classes in the experimental and control groups, as shown in Table 1, were found to be comparable in age, sex, I. Q., and achievement. The sample reflects a variety of abilities and backgrounds characteristic of students in a blue-collar community.

TABLE 1

COMPARISON OF EXPERIMENTAL AND CONTROL GROUPS IN AGE, SEX, I. Q. AND ACHIEVEMENT: GRADES FIVE AND SIX

	EXPERIMENTAL					CONTROL				
GRADE	CLASS		AGE	I.Q.	MAT	CLASS		AGE	I.Q.	MAT
5	A	Boys	10 yrs. 4 mo.	108	34	A	Boys	10 yrs. 4 mo.	109	31
		Girls	10 yrs. 0 mo.	109	33		Girls	10 yrs. 5 mo.	111	31
	B	Boys	10 yrs. 5 mo.	102	30	B	Boys	10 yrs. 6 mo.	102	33
		Girls	10 yrs. 5 mo.	111	30		Girls	10 yrs. 3 mo.	109	34
Totals			10 yr.4 mo.	107.5	31.7			10 yr.4 mo.	107.7	32.2
6	C	Boys	11 yrs. 6 mo.	102	24	C	Boys	11 yrs. 6 mo.	107	25
		Girls	11 yrs. 4 mo.	108	25		Girls	11 yrs. 8 mo.	106	26
	D	Boys	11 yrs. 3 mo.	104	29	D	Boys	11 yrs. 5 mo.	107	26
		Girls	11 yrs. 1 mo.	109	30		Girls	11 yrs. 4 mo.	108	27
Totals			11 yr.4 mo.	105.7	27.5			11 yr.5 mo.	107	26

Procedure

Conditions: The career awareness curriculum was administered to the classes in the experimental group for one and one-half hours per day, five days per week, seventeen school weeks, for a total of one hundred twenty-eight hours.

Instructional Materials and Strategies: The career awareness curriculum guide (see Appendix A) was developed by the career curriculum staff of the Northside School under the supervision of the author during the summer of 1974. The activities were designed to develop and strengthen creative problem-solving skills through the use of career concepts and objectives.

The guide consisted of six career education concepts and developed an average of four student performance objectives for each concept. It provided for teacher comments and recommendations for change. Although no changes in the guide were implemented during the course of the study, these comments and recommendations were to serve as the basis for revisions at the end of the school year.

The guide presented problem-solving and decision-making tasks related to the pupils' experiences and to occupations. They were appropriate for their levels of readiness and were simultaneously meaningful and realistic to the extent possible. In these tasks, children actively entered into the solving of those problems which confronted them; were encouraged to make decisions; and were given the opportunity to test their problem-solving and decision-making skills. In these processes children learned to examine possible consequences of various actions, including accepting the responsibility of one's decisions. The suggested activities related the instructional content of this program to other school subjects and encouraged children to think of interesting and unusual problems which might arise in connection with these areas.

In addition to activities suggested in the guide, teachers constructed meaningful tasks and activities and used activities selected from commercial materials and kits.

For the solving of problems, any one or any combination of two or more of the following skills were needed: restating the problem, formulating questions, analyzing inferences, generating new ideas, testing hypotheses, and evaluating courses of action.

Role playing is a technique which leads to active participation in problem-centered situations. Role playing and the experiencing of different roles are considered important to the elementary pupils' career development.[76]

Through the use of this technique, children discussed and analyzed the problem broadly. Research and discussion led to tentative solutions. Children selected roles and spoke from many viewpoints, presenting several solutions to a similar problem and arriving at the realization that there may be multiple solutions. Role playing also promoted consideration of long-range effects of solutions and choices when testing if/then consequences of possible alternative decisions.

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[76] Robert L. Gibson, *op. cit.*, p. 59.

Brainstorming was a technique used in this study to find a larger number of ideas and more original ideas.

Teachers presented brainstorming to the children with four basic rules: criticisms ruled out; free wheeling welcomed; quantity wanted; and combinations and improvement sought.[77] Time limits were set in these sessions.

Counseling was viewed in this study as any ethical process used by the counselor to help promote change in children.

Counseling was provided through a guidance intern. In this program, counseling focused on changes in children's understanding and knowledge of careers; and in children's ability to solve problems creatively. It was the counselor's responsibility to help children synthesize, integrate, evaluate and generalize information and experiences into some meaningful aspect.

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[77] E. Paul Torrance, "Is Creativity Teachable?" Bloomington, Indiana: Phi Delta Kappa Educational Foundation, 20, 1973, 15.

The counselor met with the children, in groups of six, at least once a week for a period of thirty minutes; and with individuals for periods ranging from fifteen to thirty minutes, once a week. Those children seen individually were either teacher referrals, self-referrals, or counselor referrals.

Staff Development: Six teachers and one substitute teacher received specific in-service education for this program. These teachers had volunteered to participate in the program and in the in-service training as well.

Teacher-principal meetings occurred weekly at first, then on a bi-weekly basis as the program progressed. The outcomes of these meetings are as follows:

(1) Statement of philosophy: All children are capable of asking and wondering; of guessing and supposing; of questioning and speculating. Therefore, the curriculum and classroom procedure should nurture creative problem-solving skills by:

(a) applying strategies and techniques which would help students rely, not on finding answers ready-made from all-knowing teachers and infallible books, but on finding solutions through the use of their own powers of inquiry, curiosity and independence; and through their ability to draw together domains of their experiences which have not previously been seen to be related;

(b) being alert to the existence of creative learning and thinking, as distinct from rote- and authority-cenetered learning;

(c) encouraging children to recognize the existence of, and see alternative solutions to, problems;

(d) establishing a classroom procedure which lays great emphasis on the importance of discovering both problems and solutions;

(e) involving both the cognitive and affective attributes of creative problem-solving when giving practice and experiences in creative problem-solving activities.

(2) Concepts and objectives: The concepts and objectives were selected from basic theories in career development studies. At these sessions, methods for developing these concepts and objectives were reviewed; ideas for effective means for infusing these concepts and objectives into the present curriculum were discussed; and suggestions for implementation were generated.

(3) Instructional materials: Commercial materials were reviewed and evaluated; and teacher-made activities and materials were developed and shared.

(4) Other techniques: One session provided training in the techniques of role-playing and brainstorming. Another session was devoted to viewing films on the use of these techniques.

(5) Field visitations: In-service training also included attendance at the BOCES Career Education Workshop; visitation of other

career education programs currently in operation; and participation in other workshops on career education.

(6) Current literature: Throughout the program, literature relevant to creative problem-solving and career development theories was made available to the staff.

Parent and Community Involvement: Open channels of communication between the school, the home, and the community are vital elements for program success.

A system of communication with the parents of children involved in the career awareness program was developed. This was accomplished through letters to the parents and by direct personal communication via class meetings. Such face-to-face discussions helped facilitate mutual exchange of viewpoints regarding career-development needs and ways to meet those needs.

During the course of the program, parents were also invited to view a video taping (see Appendix B) and slides which showed evidence of a wide variety of activities involving career education and its relevance to the whole curriculum. These video tapes and slides were further viewed as part of a presentation to the Board of Education at a study session; and then at an open School Board meeting for the Board of Education (Appendix C).

Parent interest and support resulted in their participation as consultants and/or involvement as guest speakers at the school. Other community resource people were also invited to participate (Appendix C).

Class field visits into the community were also arranged. Since its inception, and throughout the program, parents participated in an ongoing review and periodic evaluation of program development.

Acceptance and Implementation of the Program in the Levittown Schools: The success of any program is influenced by the motivation and enthusiasm of those involved in the program.

The teachers involved in the Career Awareness Program, the Supervisor of Guidance, and this author constituted a team whose purpose was to introduce and perpetuate a program in career education which would develop better skills in creative problem-solving.

Working together, the members of this team shared professional problems as well as ideas, achievements and anecdotes from their experiences in the program. As the project progressed, they mutually reinforced the application of the program.

In order to keep the total staff informed of the developments of the Career Awareness Program, on-going activities and materials were discussed and shared regularly with the entire faculty. Information on career development and creative problem-solving was disseminated. This was accomplished through faculty and grade meetings and by reports from the author.

Teachers not actively involved in the Program were encouraged to visit classrooms where the

the Career Awareness Program was operational and to attend conferences and workshops related to these areas.

In an effort to gain acceptance on a district level, the following steps were taken:

(1) Classrooms were open for visitation by district personnel.

(2) A presentation with video tape was made at an elementary principals' meeting, which showed evidence of the implementation and progress of the Program. (See Appendix C)

(3) A presentation, with video taping of the Program, was made for a Board of Education Study Session.

(4) A presentation, with video taping of the Program, was made for an open School Board meeting.

(5) A presentation, with video taping of the Program, was made for the School and Community Committee of the Levittown Council of PTA's.

(6) Preparations are being made to offer a district in-service course for teachers in the fall of 1975 (see Appendix C).

This study had the moral support and, in fact, a commitment, from the district central administration to implement this program as part of our curriculum offerings (see Appendix C).

This Program has also gained recognition by the Superintendent and Assistant Superintendent and has been distributed for broad viewing on a national level (see Appendix C).

Instrumentation

Background: The existing standard curriculum in the Levittown Schools had had minimal exposure in the area of creative problem-solving. It was anticipated that the Career Awareness Program, because of its concentration on creative problem-solving activities through career concepts, would effect a positive change in the students' ability to solve problems.

Instrument: The Torrance Tests of Creative Thinking, Figural Tests, Forms A and B (Appendix D) were administered to 94 female and 120 male children, for a total number of 214 students from two fifth- and two sixth-grade classes. The Torrance Tests of Creative Thinking (TTCT) were administered during the week prior to, and during the week subsequent to the experimental treatment. These were scored by the Personnel Press Scoring Service. Gain scores, defined as the arithmetic differences between pre- and post-test measures, were used as the dependent measures.

Construction: The TTCT was constructed by E. Paul Torrance, Ph. D., in 1966, to detect and measure in a useful way and functional fashion the creative potentialities of children, adolescents, and adults.[78]

The figural form can be administered as a group test. The tests include three activities with an overall administration time of thirty minutes. The first task, Picture Construction, is designed to stimulate originality and elaboration. It requires the subject to draw something clever or unusual, using a shaped piece of paper provided with the test, as the basis for this picture. The second task, Incomplete Figures, presents the test-taker with a variety of abstract lines or designs which he/she is to sketch into unusual pictures or objects. Repeated Figures is the third task; it is essentially the same as the second, except that the line forms are the same. These last two tasks elicit increasingly greater variability in fluency, flexibility, originality, and elaboration.[79]

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[78] E. Paul Torrance, Norms-Technical Manual, p. 5.

Although the basic activities differ, each is scored for fluency, flexibility, originality, and elaboration on the assumption that one can engage in the range of problem-solving activities either creatively or uncreatively. The number of relevant responses produced by the subject yields the measure of fluency. The number of different categories, products, or uses gives a measure of flexibility. The statistical infrequency of these responses (based on earlier research) is the measure of originality. The number of embellishments in responses provides an elaboration score. The scores for fluency, flexibility, originality, and elaboration are summed separately across all figural subtests, suggesting similarity in the creative process across a variety of different activities.[80]

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[79] Ibid., p. 15.

Reliability: Interscorer reliability is usually above .90 for the individual scores when scored by classroom teachers. However, increased reliability of scoring (.76 to .99, most in the high .90's) is attained by trained scorers, as shown in Table 2.[81]

Evidence for the test, retest and equivalent form reliability is extensive. In fifteen studies using equivalent forms or time intervals from one week to three years, the majority of the reliability coefficients exceeded .70.[82] Although these studies are not fully reported, the diversity of samples and time intervals strongly suggests that TTCT scales have useful reliability.

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[80] Ibid.

[81] Ibid., p. 17.

[82] Ibid., p. 19.

TABLE 2

SAMPLE DATA ON INTERSCORER RELIABILITY BETWEEN
EXPERIENCED AND INEXPERIENCED SCORERS
ON SAMPLE OF 100 FIGURAL TESTS

TATISTIC	FLUENCY	FLEXIBILITY	ORIGINALITY	ELABORATION
ean, Scorer 1	20.7	16.5	34.6	50.5
t. Dev., Scorer 1	6.9	5.9	14.2	19.5
ean, Scorer 2	20.9	16.5	35.1	53.1
t. Dev., Scorer 2	6.8	5.5	13.6	19.4
oefficient of orrelation etween scores	.98	.98	.86	.92

Validity: The validity of the TTCT rests on more than fifty investigations. Most investigations are concerned with construct and predictive validity. The evidence is internally consistent and generally consistent with the literature of creative behavior.

Construct validity of the instrument: A large number of the studies employing the TTCT have been conducted to increase understanding of the qualities being measured by the tests. Some of these studies have involved the comparison of the personality characteristics of persons achieving high scores on the tests with those who have low scores, while others have involved simple correlations between the creativity test scores and other measures.[83]

Predictive validity of the instrument: The major short-range prediction studies of one week to nine months using TTCT show in Table 3 a significant level at .01.

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[83] *Ibid.*, p. 22.

TABLE 3

SUMMARY OF SHORT-RANGE (ONE WEEK TO NINE MONTHS) PREDICTIVE VALIDITY STUDIES OF THE TORRANCE TESTS OF CREATIVE THINKING

INVESTIGATOR AND DATE	SAMPLE	NUMBER	CREATIVE BEHAVIOR PREDICTED	LEVEL SIGNIF.
Weisberg and Springer, 1961	Gifted 4th Graders	32	Humor, fantasy, etc.	.01
Torrance, 1963	2nd - 6th Graders	125	Creative ideas about science toys and uses	.01
Yamamoto, 1963	5th and 6th Graders	40	Originality of imaginative stories	.01

Thus far, there have been reported five long-range prediction studies, shown in Table 4: three by Torrance and his associates, and two by other investigators.[84] All of these studies, ranging from five to twelve years, are reported "significant at better than the .01 level."[85]

Acceptance and Standardization: The Norms-Technical Manual for the Torrance Tests of Creative Thinking identifies a survey of 142 studies regarding the improvement of creative thinking. One hundred six studies have used TTCT as criteria for measurement.[86]

Norms: In the first edition of the Norms-Technical Manual, the core of the normative data was based on samplings from each grade level in the same school system. Since that time, a decision has been made to shift from comparison group norms of this type because of the expense and diffi-

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[84] Ibid., p. 44.

[85] Ibid., p. 45.

[86] E. Paul Torrance, "Is Creativity Teachable?" p. 8.

TABLE 4

SUMMARY OF LONG-RANGE PREDICTIVE VALIDITY STUDIES OF THE TORRANCE TESTS OF CREATIVE THINKING

ESTIGATOR DATE	SAMPLE	NUMBER	LENGTH STUDY	BEHAVIOR PREDICTED	r
t, 1971	2-4 Graders	16	6 yrs.	Achievements in creative arts and sciences	---
pley, 1971, 2	7th Graders	111	5 yrs.	Creative achievement out of school	.51*

gnificant at better than the .01 level.

culties in arranging for such samplings and the impossibility of adequately classifying and describing these norm groups.[87]

Torrance has since assembled large samples at each educational level from a variety of localities within the United States and from a variety of types of schools.[88]

Torrance used data in preparing the norms with careful attempts to exlude samples having special characteristics that might be expected to influence performance on the tests, such as those found in the mentally retarded, gifted, blind, deaf, severely disadvantaged, and highly trained groups.[89]

Figural Forms A are commonly used as pre-tests and Figural Forms B as post-tests.[90] This study followed these recommendations.

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[87] E. Paul Torrance, Norms-Technical Manual, p. 48.

[88] Ibid.

[89] Ibid.

[90] Ibid.

Tables 5 and 6 present the means and standard deviations separately for fluency, flexibility, originality, and elaboration of Figural Forms A and B. The patterns of scores across grades reflect the fact that, in schools as they exist in the United States, creative development tends to be non-linear. Similar phenomena are observed both when total school populations are tested grade by grade; and when samples are drawn from a school system.[91]

Normative data for first, second, and third grades are based on individual, oral administration; whereas, relevant to this study, group administrations were used in all other instances.[92]

Torrance provides in the Norms-Technical Manual the means and standard deviations of all scores derived from the figural batteries for the

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[91] Ibid.

[92] Ibid.

TABLE 5

MEANS AND STANDARD DEVIATIONS FOR FIGURAL FORM A BY EDUCATIONAL LEVEL

VEL	NUMBER	FLUENCY		FLEXIBILITY		ORIGINALITY		ELABORATION	
		Mean	SD	Mean	SD	Mean	SD	Mean	SD
ndergarten	304	14.3	7.0	10.4	4.4	20.5	11.6	34.5	17.1
rst grade	838	23.1	6.9	15.6	4.5	26.3	10.5	56.1	24.9
cond grade	711	23.7	6.5	17.5	4.5	30.4	11.1	60.1	24.0
ird grade	1844	22.2	7.7	16.2	4.7	26.8	11.4	64.2	28.5
urth grade	1435	22.7	7.1	17.1	4.9	30.1	11.5	66.7	28.4
fth grade	1365	21.8	6.8	16.0	5.2	28.1	10.7	68.2	26.6
xth grade	1678	20.2	6.7	15.8	4.9	29.0	11.1	75.8	32.6
nior high	953	19.9	6.5	15.7	4.9	25.5	10.2	74.7	27.1
nior high	989	19.6	6.7	15.7	5.0	27.4	10.0	70.6	28.6
llege, undergrad.	1048	18.3	5.8	14.8	4.4	27.8	10.5	84.7	33.1
aduate students	202	18.0	4.29	14.5	3.2	21.3	6.7	89.2	31.1

TABLE 6

MEANS AND STANDARD DEVIATIONS FOR FIGURAL FORM B BY EDUCATIONAL LEVEL

EL	NUMBER	FLUENCY		FLEXIBILITY		ORIGINALITY		ELABORATION	
		Mean	SD	Mean	SD	Mean	SD	Mean	SD
dergarten	195	13.6	4.4	10.4	3.7	21.8	11.2	38.6	15.9
st grade	480	19.9	6.7	13.9	4.4	21.5	9.7	47.5	23.2
ond grade	863	20.2	7.1	14.9	4.1	22.7	9.9	65.1	25.7
rd grade	780	18.7	6.9	13.7	4.4	24.7	10.8	71.3	27.9
rth grade	977	20.9	6.8	15.2	4.6	24.1	11.0	78.5	30.1
th grade	1086	22.6	7.3	10.5	5.1	25.9	11.0	76.6	27.7
th grade	1906	21.5	8.6	16.3	5.2	32.1	12.7	89.5	34.8
ior high	529	19.2	6.5	15.0	5.1	27.3	10.6	78.9	32.8
ior high	157	21.8	7.1	17.6	5.3	34.1	12.1	90.2	40.1
lege, undergrad.	639	14.8	6.0	12.4	4.7	19.9	11.0	68.8	29.6
duate students	142	20.6	7.0	14.9	4.1	31.1	13.4	91.6	30.8

fifth-grade sample participating in the alternate forms equivalency study.[93] Table 7 presents the means and standard deviation of all scores derived from the figural batteries for the fifth-grade sample participating in the alternate form equivalency study in which the group took all of the Test Forms A and B within a two-week period.

Raw scores for TTCT are converted into T-scores. Table 8 includes the data needed for converting raw scores to standard or T-scores.

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[93] Ibid.

TABLE 7

MEANS AND STANDARD DEVIATIONS OF SCORES ON FIGURAL SUBTESTS FOR SAMPLE OF FIFTH GRADERS (N = 112) IN ALTERNATE FORMS EQUIVALENCY STUDY

IVITY	VARIABLE	FORM A		FORM B	
		Mean	SD	Mean	SD
1	Originality	2.33	1.97	2.37	2.28
	Elaboration	16.52	6.30	16.29	7.31
2	Fluency	9.05	6.05	9.69	3.23
	Flexibility	6.26	2.12	7.66	1.80
	Originality	9.16	4.13	10.02	3.41
	Elaboration	23.39	9.52	24.46	11.87
3	Fluency	14.90	6.16	17.08	6.88
	Flexibility	9.76	4.56	11.13	5.14
	Originality	16.05	9.69	13.70	10.39
	Elaboration	21.60	9.65	30.05	12.45
otal	Fluency	23.95	7.24	26.77	9.29
	Flexibility	16.02	5.87	18.79	6.04
	Originality	27.54	11.12	26.09	11.22
	Elaboration	61.51	19.11	70.80	24.16

TABLE 8

T-SCORE CONVERSION TABLE FIGURAL FORMS A AND B BASED ON FIFTH GRADE DATA (EQUIVALENCY STUDY SAMPLE)

	FORM A				FORM B			
Score	Fluency	Flex.	Orig.	Elab.	Fluency	Flex.	Orig.	Elab.
100	--	--	83	157	--	--	81	191
95	--	--	78	147	--	43	76	179
90	--	38	72	138	--	40	70	167
85	--	35	67	128	--	37	65	155
80	--	33	61	119	43	34	59	143
75	41	30	55	109	40	31	54	131
70	38	27	50	100	37	28	48	119
65	34	24	44	90	34	25	43	107
60	31	22	38	81	31	22	37	95
55	27	19	33	71	27	19	32	83
50	24	16	27	62	24	16	26	71
45	20	14	22	52	21	13	21	59
40	17	11	17	43	18	10	15	47
35	13	8	13	33	15	7	10	35
30	10	6	9	24	11	4	4	23
25	6	3	5	14	8	1	0	11
20	3	0	0	5	5	--	--	0

CHAPTER IV

RESULTS

Four separate two x two factorial analyses of covariance were computed for the four scales (fluency, flexibility, originality, and elaboration) of the Torrance Test of Creative Thinking (TTCT). In all cases, the pre-test score for that factor was covariate and the arithmetic gain score was the variate. The computer program MANOVA was used.

Table 9 shows a summary of raw means and standard deviation for each of the four scales.

Table 10 shows the adjusted mean gains from the covariance analysis, relative to the arithmetic mean gain for each of the four subtests. Since analyses of covariance were used, the adjusted mean gains will be used in describing specific main effects or interactions.

For clarity, each of the specific covariance analyses are discussed separately.

TABLE 9

SUMMARY OF MEANS AND STANDARD DEVIATION FOR EACH DEPENDENT MEASURE OF THE TTCT

FACTORS		FLUENCY		FLEXIBILITY		ORIGINALITY		ELABORATION	
reatment	SN	Pretest	Gain	Pretest	Gain	Pretest	Gain	Pretest	Gain
XP. F 49	$\bar{X}$	54.592	-0.816	55.408	-2.592	61.776	14.388	69.551	-7.714
	SD	10.095	13.030	9.083	11.356	14.915	20.377	15.054	16.210
XP. M 55	$\bar{X}$	52.345	0.545	54.545	-2.091	63.073	9.836	67.055	-8.873
	SD	10.839	11.598	8.940	12.126	14.917	19.570	13.742	14.530
ONT.F 45	$\bar{X}$	52.800	-4.267	53.911	-4.622	54.200	13.100	70.533	-11.911
	SD	9.397	11.987	8.870	9.074	13.707	18.128	14.484	11.753
ONT.M 65	$\bar{X}$	49.200	-5.738	53.308	-7.108	60.108	7.815	65.062	-12.677
	SD	9.969	8.386	7.886	7.661	12.436	16.598	8.862	8.669

TABLE 10

ADJUSTED MEAN GAINS OF THE FOUR SCALES OF THE TTCT

FACTORS		FLUENCY		FLEXIBILITY		ORIGINALITY		ELABORATION	
reatment	SN	XGain	XAdj.Gain	XGain	XAdj.Gain	XGain	XAdj.Gain	XGain	XAdj.Gain
XP. F.	49	-0.816	0.216	-2.592	-2.024	14.388	15.066	-7.714	-6.676
XP. M.	55	0.545	0.683	-2.091	-1.855	9.836	11.013	-8.873	-9.276
ONT.F.	45	-4.267	-3.948	-4.622	-4.629	13.100	10.769	-11.911	-10.305
ONT.M.	65	-5.938	-6.854	-7.108	-7.730	7.815	7.853	-12.677	-14.321

Fluency

A two x two factorial analysis of covariance was computed on the gain scores for the fluency subtest. The summary table for this analysis is shown in Table 11. The main effect of treatment was significant at the .01 level (F (1,201) = 18.0, $p<.01$), with the experimental group having a higher adjusted mean gain (0.463) than the control group adjusted mean gain (-5.665). The main effect of sex was not significant, nor was the treatment by sex interaction.

Flexibility

A two x two factorial analysis of covariance was computed on the gain scores for the flexibility subtest. The summary table for this analysis is shown in Table 12. The main effect of treatment was signifcant at the .01 level (F (1,209) = 11.7, $p<.01$), with the experimental group having a higher adjusted mean gain (-1.935) than the control group adjusted mean gain (-6.462). The main effect of sex was not significant, nor

TABLE 11

ANALYSIS OF COVARIANCE SUMMARY TABLE FOR FLUENCY GAIN SCORES

SOURCE	SS	DF	MEAN SQUARE	F	P<
reatment (t)	1971.1	1	1971.1	18.047	.01
ex (s)	79.2	1	79.2	0.726	ns
reatment Sex (Txs)	149.1	1	149.1	1.365	ns
ITHIN (error)	22826.5	209	109.2	---	--

TABLE 12

ANALYSIS OF COVARIANCE SUMMARY TABLE FOR FLEXIBILITY GAIN SCORES

SOURCE	SS	DF	MEAN SQUARE	F	P <
reatment	1081.1	1	1081.1	11.773	.01
ex	115.5	1	115.5	1.257	ns
reatment ex	140.3	1	140.3	1.528	ns
THIN (error)	19192.9	209	91.8	---	--

was the treatment by sex interaction.

Originality

A two x two factorial analysis of covariance was computed on the gain scores for the originality subtest. The summary table for this analysis is shown in Table 13. No main effects were significant at the .05 level, nor was the treatment by interaction.

Elaboration

A two x two factorial analysis of covariance was computed on the gain scores for the elaboration subtest. The summary table for this analysis is shown in Table 14. The main effect of treatment was significant at the .01 level (F (1,209) - 10.1, $p<.01$), with the experimental group having a higher adjusted mean gain (-8.051) than the control group adjusted mean gain (-12.625). The main effect of sex was significant at the .05 level with the adjusted mean gain of female (-8.113) significantly higher than the adjusted mean gain for males (-11.960). Treatment by sex interaction was not significant at the .05 level.

Summary Table 15 shows the adjusted means for each of the main effects from the four analyses. Those main effects which were significant are indicated. There was no signifcant treatment by sex interaction present. However, the cell adjusted means may be seen in Table 10.

TABLE 13

ANALYSIS OF COVARIANCE SUMMARY TABLE FOR ORIGINALITY GAIN SCORES

SOURCE	SS	DF	MEAN SQUARE	F	P<
reatment	780.1	1	780.1	2.445	ns
ex	624.2	1	624.2	1.956	ns
reatment Sex	16.9	1	16.9	0.053	ns
ITHIN (error)	66678.5	209	319.0	---	--

TABLE 14

ANALYSIS OF COVARIANCE SUMMARY TABLE FOR ELABORATION GAIN SCORES

SOURCE	SS	DF	MEAN SQUARE	F	P <
Treatment	1117.1	1	1117.1	10.100	0.01
Sex	548.9	1	548.9	4.963	.05
Treatment XSex	22.9	1	22.9	0.208	ns
WITHIN (error)	23116.2	209	110.6	---	--

TABLE 15

TABLE OF SUMMARY OF MAIN EFFECT ADJUSTED GAIN MEANS FOR EACH SCALE OF THE TTCT

SOURCE		FLUENCY	FLEXIBILITY	ORIGINALITY	ELABORATION
	P<	.01	.01	ns	.01
Treatment	Exp	0.463	-1.935	12.922	-8.051
	Cont	-5.665	6.462	9.046	-12.625
	P<	ns	ns	ns	.05
Sex	Female	-1.777	-3.271	13.009	-8.413
	Male	-3.400	-5.037	9.301	-11.960

CHAPTER V

DISCUSSION AND CONCLUSION

The results of this study are discussed in three sections. The first section offers possible explanations for the results obtained. The second section suggests further study to determine reasons for relationships between the career awareness curriculum and significant gains in creative problem-solving. The final section makes suggestions for analysis of the present career awareness curriculum to determine implications for further curriculum development and/or revisions in career awareness and creative problem-solving.

Explanations of results obtained

The data indicates that the gain scores for the experimental students were signifcantly better than the control students for the scales of fluency, flexibility, and elaboration.

A measuring instrument is evaluated in terms of the definition of the phenomena it is designed to assess, and the results are interpreted in terms of this definition. The figural test in the TTCT represents three different aspects or tendencies of creative problem-solving: structuring and integrating; creating and re-creating new ideas; and finding a purpose for something that has no definite purpose and elaborating it in such a way that the purpose is achieved.[94]

Not too much evidence is provided to support the fact that the separate scores obtained are accomplishing measurement of really different attributes. However, there seems to be evidence from the general scheme of the figural activities that the score for elaboration is more closely related to creative problem-solving, with the understanding that the scores for fluency, flexibility, originality, and elaboration are summed separately across all figural subtests. This suggests similarity in the creative process across a variety of different activities.

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[94] Ibid., p. 15.

Figural fluency represents the ability to produce a large number of ideas. While Torrance suggests that high scores in this subtest can be obtained by "impulsive and banal thinkers," one of the conditions for creative problem-solving is the ability to generate enough ideas to provide alternative courses of action.[95]

Figural flexibility represents a person's ability to produce a variety of kinds of ideas: "to shift from one approach to another; or to use a variety of strategies."[96] The score in this test satisfies the condition for creative problem-solving that "the product of the thinking has novelty."[97]

Figural originality represents a person's ability to produce ideas that are away from the obvious. The score in this test satisfies the condition for creative problem-solving that the "thinking is unconventional."[98]

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[95] Ibid., p. 51.

[96] Ibid., p. 57.

[97] Ibid., p. 10.

The number of embellishments in responses provides an elaboration score. Figural elaboration represents a person's ability to take constructive action. It is the elaboration score that this author has identified as the score most closely related to creative problem-solving. Specifically, the elaboration score "reflects the person's ability to develop, embroider, embellish, carry out, or otherwise elaborate ideas."[99]

Torrance defined creativity as a "process of becoming sensitive to problems, deficiencies, gaps in knowledge, missing elements, disharmonies, and so on; identifying the difficulty; searching for solutions; making guesses or formulating hypotheses about the deficiencies; testing and retesting the hypotheses and possibly modifying and retesting them; and finally communicating the results."[100]

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[98] _Ibid._

[99] _Ibid._, p. 59.

Therefore, Torrance gives a definition of creativity that indicates concern for assessing problem-solving in a general sense. The results obtained in the data indicate, significantly, that the students' ability to solve problems creatively improved after exposure to the Career Awareness Program.

This study supports two other popular studies which used TTCT specifically to measure creative problem-solving skills. They were: Feldhusen, Speedle, and Treffinger's "The Purdue Creative Thinking Program,"[101] and Covington, Crutchfield, and Davies' The Productive Thinking Program.[102]

Osborn-Parnes conducted twenty studies using the TTCT instrument and reported 94% success after using a creative problem-solving intervention.[103]

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[100] Ibid., p. 8.

[101] J. F. Feldhusen, S. M. Speedle, and D. J. Treffinger, "The Purdue Creative Thinking Program: Research and Evaluation," NSPI Journal, 10, No. 5, 1971, 5.

[102] M. F. Covington, R. S. Crutchfield, and L. Davies, The Productive Thinking Program, Berkeley, California: Educational Innovations, Inc., 1966, p. 7.

Assuming that all of the factors in the classroom were held constant, the results permit the generalization that active intervention with this Career Awareness Program improves creative problem-solving skills in fifth- and sixth-grade students in this narrow geographic area and Socio Economic Status group; and that females show significant gains over males.

The investigator found that the main effect of sex was significant at the .05 level, which supports the Davis, Hogan and Strout study (1962), which shows that more mature choices (a function of creative problem-solving) among sixth-grade students are made by the female sex.[104]

Further, this investigator found that exposure of seventeen weeks to the Career Awareness

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[103] E. Paul Torrance, Norms-Technical Manual, p. 9.

[104] Larry J. Bailey *et al.*, *op. cit.*, p. 114.

Program provided enough relevant activities and practices in the skills identified as "creative problem-solving" to produce significant gain changes in the experimental group as compared to the untreated control group. This supports other major short-range prediction studies of one week to nine months using the TTCT, such as Weisberg and Springer (1961) and Yamamoto (1963).[105]

A study of test-retest scores reflects a loss in the mean score on the post-test. This drop in the mean scores may be attributed to several factors.

One important factor relates to the scoring procedure. Torrance reports that the interscorer reliability is "rather consistently above .90 and there have been only very small differences in means with the use of trained scorers."[106] It was observed that the test-retests were not scored by the same scorers. This factor could not be controlled by this investigator; however, it does present a possible reason for the negative scores.

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[105] E. Paul Torrance, Norms-Technical Manual, p. 44.

[106] Ibid., p. 17.

A second factor might relate to the fact that different forms of the TTCT were used for the study. Torrance states that "the test-retest reliability coefficients are generally higher than for the figural tests and for fluency and flexibility than for originality and elaboration."[107] He further states that "since motivation is indisputably important in creative thinking, it is to be expected that motivational conditions affect test-retest reliability."[108]

A third factor might be that the post-tests were administered within the last three days before a school vacation break.

A fourth possible explanation for the drop in scores between the test-retest could be related to history. The world situation at the time of the post-tests was crisis-oriented around the imminent fall of Vietnam. In addition, the issue of policeman layoffs was very much in the news. Since a good number of parents are civil service employees, the effects of this situation and the general economic crunch may have been instrumental in producing the negative scores.

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[107] Ibid., p. 19.

[108] Ibid., p. 20.

While these factors might all have influenced the post-test scores, the fact that negative scores were obtained is not relevant to this study. This study concerns itself with a comparison of the gain scores between the experimental and the control groups.

Further Research

While the factor of treatment yielded significant results in this study, it cannot be concluded that the Program alone produced the significant gain. It must be recognized that the influence of the teacher (the classroom climate generated and the strategies used) and the Program may have combined to facilitate the development of pupil creative problem-solving skills. The possibility of teacher differences exists but could not be controlled within the scope of this study.

This suggests, then, that further research is needed to determine what effect, if any, the influence of the teacher may have in the development of creative problem-solving skills through the use of career concepts. What can teachers with varying capabilities and abilities do, or not do, to encourage pupil gains in creative problem-solving skills? What effects would teacher-directed or non-directed instruction have on creative problem-solving skills?

Further research should also be undertaken to determine at what grade level creative problem-solving skill instruction is effectively initiated.

Accepting the assumption that the factors of time and intensity of instruction were constant, further research could be conducted to determine if the same results would be achieved using the same program with less time exposure.

Finally, additional research should be conducted using both forms of the TTCT to determine if the use of different forms for test-retest has any effect on the scores obtained.

Curriculum Implications

Since the somewhat global approach to creative problem-solving, in this study, was effective, it is appropriate to ask which parts of the Career Awareness Program contributed most to the gains which were realized by the experimental students.

Was it because the existing curriculum has minimal exposure in the area of creative problem-solving activities, whereas the Career Awareness Program concentrated on creative problem-solving activities through career options, and this elicited a positive change in the students' ability to solve problems? Was it the novelty of the career concepts which provided stimulation and motivation for teacher preparation and student response? Or was it the discipline of prescribed instructional time and intensity which yielded the results which were obtained?

It can be safely implied that career education challenges the concept that the basic function of the school is transmission of knowledge and that, as stated by Glasser, "success in school depends upon involvement, relevance, and on the problem-solving approach."[109]

To this investigator, the need for change in our present curriculum is evident. The potential consequences for career development--but, more specifically, a career awareness program--suggest the way to begin to provide decision-making relevant to (1) planning and organizing, (2) completion of tasks, (3) making evaluations and recommendations, and (4) developing problem-solving skills. As indicated in the literature, these skills are characteristic of maturity and form a sound basis for a curriculum.

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[109] William Glasser, op. cit., p. 4.

This study afforded the author a sense of accomplishment and satisfaction. If this practicum assists the demands of today's society and the dynamics of modern civilization, as captured in the remarks of John Gardner, it is a significant contribution to the field of education.

> Our capacity to create new problems as rapidly as we solve the old has implications for the kind of society we shall have to design. We shall need a society that is sufficiently honest and open-minded to recognize its problems, sufficiently creative to conceive new solutions, and sufficiently purposeful to put these solutions into effect. It should be, in short, a self-renewing society, ready to improve solutions to problems it won't recognize until tomorrow.[110]

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[110] John W. Gardner, No Easy Victories, New York: Harper & Row Publishers Inc., 1968, p. 39.

APPENDIX A

CAREER EDUCATION GUIDE

The Career Education Guide is a Northside School publication consisting of activities for six career concepts and twenty-one student performance objectives. Activities for each concept and objective are developed for Grades 3, 4, 5, and 6.

The Career Education Guide is not a part of this document but is included separately.

NORTHSIDE SCHOOL

To: Dr. William Schultheis, Assistant Superintendent

From: Miss Rose M. Auteri, Principal

Date: March 28, 1974

Subject: SUMMER CURRICULUM WORK - A PROGRAM OF CAREER AWARENESS

RATIONALE FOR CAREER AWARENESS PROGRAM:

The content of curriculum must be reoriented towards the relevant and real world of work, the economics of our society and culture, and a productive and acceptable use of leisure time pursuits.

This kind of reorientation will continue to stress the 3 Rs, but will add a new dimension to our school, that learning is living life as a fulfilled human being.

Attitudes and values, effective human relationships, study skills, building self-reliance and self-sufficience, are all part of the total lifework of pupils and must be developed with the 3 Rs.

A Career Awareness Program has the strong possibility of helping to revitalize curriculum and instruction.

DESIGN:

1. Develop State of Philosophy.
2. Establish goals of program.
3. Identify and assess needs of children, and community in this area.
4. Develop and recommend curriculum additions/modifications/change.
5. Develop and recommend staff development plan (in-service training or whatever).

TEACHER INVOLVEMENT:

1. Edith Bushman - Grade 4
2. Elaine Marzullo - " 5
3. Yetta Podgor - School Nurse Teacher
4. Rose M. Auteri - Principal

TIME INVOLVEMENT:

40 Hours - Each Participant

TARGET DATE:

June 24 - July 3, 1974

FINANCIAL INVOLVEMENT:

8 Days .. @ ..	$32.50	-	$260.00	- Mrs. Bushman
" "	"		260.00	- Miss Marzullo
" "	"		260.00	- Mrs. Podgor
			0	- Miss Auteri
	Total		$780.00	

DEPARTMENT OF INSTRUCTION
LEVITTOWN PUBLIC SCHOOLS

TO: Dr. Robert Neidich

FROM: William C. Schultheis
Assistant Superintendent for Instruction

DATE: May 1, 1974

SUBJECT: MONTHLY DEPARTMENT OF INSTRUCTION REPORT

I. PROFESSIONAL IN-SERVICE PROGRAM - A VITAL ASPECT OF CURRICULUM DEVELOPMENT

No effective plan of curriculum development takes place in a school system without a carefully planned, budget-supported, diversified program of in-service education. This report for May 1974 will be a review of the many aspects of in-service programs being developed and refined in the Levittown Schools, including fall and spring in-service courses, professional staff conference and workshop involvement, formally scheduled district conferences, and summer curriculum workshops.

A. FALL AND SPRING IN-SERVICE COURSES

Over 170 staff members enrolled in six in-service courses offered in Fall 1974. (See Monthly Department of Instruction Report, November 5, 1973 for detailed course descriptions). Spring courses, totalling 210 teachers enrolled in twelve courses, are being concluded in the following areas of study:

1. Working with Small Groups - Mr. Glenn Mehrtens
2. Drug Education - Mr. Frank Procaccini
3. Media Production for A-V - Mr. Mortimer Segal
4. Developing Reading Skills in Academic Subjects - Mrs. Mary Ellen Malloy
5. Developing Materials & Methods to Individualize Instruction - Ms. Marion Greenwood
6. Metric System-Elementary Schools - Mr. Monroe Fremed and Mr. Elliot Lamb
7. Workshop in Art Media - Mrs. Lillian Miller

- back -

8. Introduction to Computer Programming - Mr. Edward Weilhoefer
9. Alcohol & Alcoholism - Mr. Austin Gavin
10. Outdoor & Environmental Education - Mr. Norman Skliar
11. Teaching of Oral Skills - Mrs. Anita Jacobs
12. Teaching Guitar (for Music Teachers) - Mr. Albert Dalton

In summary, 380 professional staff enrolled in eighteen courses during 1973-74. Total cost to the district for these courses is $8,020, spent for supporting instructors' salaries and course materials.

B. SUMMER 1974 CURRICULUM WORKSHOPS

Sixteen summer curriculum workshops have been authorized, pending approval of our 1974-75 school budget. These efforts will give teachers an opportunity to work singly or in small groups, during summer months, to prepare vitally-needed course outlines, plan for innovative programs, and revise out-dated guides. They include:

1. Development of experiments to up-date Modern Industrial Technology course (1 teacher x 5 days)
2. Develop lesson units for Grade 8 Integrated Studies Program (3 teachers x 4 days)
3. Develop course of study to refine Grade 7 English Strand Program (3 teachers x 3 days)
4. Develop guides for Reading-Math Lab Materials at Summit Lane Elem. School (1 teacher x 8 days)
5. Develop 7 and 8 grade Computer Math Curriculum (1 teacher x 8 days)
6. Construct games, instructional materials for slow-learners in grades 7 and 8 Mathematics (1 teacher x 8 days)
7. Develop up-dated curriculum guide for TMR classes (3 teachers x 5 days)
8. Prepare specific activities bank to meet goals of science and health in intermediate grades. (3 teachers x 5 days)

9. Develop Career Awareness Program for Northside's grades 4-5-6. (2 teachers x 5 days)
10. Preparation for establishment of East Broadway library as media center by September 1974. (1 teacher x 5 days)
11. Develop teaching units for electives in boys' and girls' physical education grades 10-12. (4 teachers x 5 days)
12. Develop outlines and innovative units of instruction for General Music 7 and 8 (3 teachers x 5 days)
13. Develop up-dated guide and units for 11th grade Health (2 teachers x 5 days)
14. Develop individual learning packets in Typing to assist slow-learner. (1 teacher x 5 days)
15. Develop recorded material for remedial work in Shorthand (1 teacher x 2 days)
16. Complete laboratory investigation Science manual for Grade 9 Science (1 teacher x 5 days)

The above summer proposals include involvement of thirty-two teachers (at $37.50 per teacher per day) working in virtually all areas of our curriculum, except for foreign language and art. Five study groups represent senior high school needs; six represent junior high school efforts; four are focused at the elementary level; and one group will work in the area of special education. Total cost to the district is estimated at $5,800.

C. SCHOOL YEAR 1973-74 PROFESSIONAL STAFF CONFERENCE AND WORKSHOP ATTENDANCE

During the past year, over 110 professional staff attended conferences in 19 areas of curriculum, including reading, open education, individualization of instruction, science, mental health, environmental education, social studies, computer scheduling, team teaching, home economics, music, library service, health, athletics, foreign languages, English, and emotional development. Using economical guidelines to support staff financially for only registration fees and mileage, it was possible to achieve this extensive teacher involvement for only $3,000. It

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DEPARTMENT OF INSTRUCTION
LEVITTOWN PUBLIC SCHOOLS

TO:
Mr. B. Angel
Miss Rose Auteri
Dr. R. Brown
Mr. H. Fremed
Mr. J. Furlong
Mr. A. Gelzer
Mr. R. Cranese
Mr. P. Hall
Mr. E. Lamb
Mr. R. Leary
Mr. P. Lochner
Mr. H. Schwarz
Mr. R. Sinko
Dr. J. Sullivan
Mr. R. Turgeon
Dr. W. Vinciguerra
Mr. P. Walsh

FROM: William C. Schultheis

DATE: June 12, 1974

SUBJECT: SUMMER 1974 CURRICULUM WORK

With approval of our budget (1876-779) yesterday, we can now activate our tentatively-approved summer curriculum work assignments.

Please review with summer curriculum workers:

1. Their plan
2. Their hours of work
3. Their completion date

Good follow-through this year should help our forthcoming curricular products to be of high quality and timely.

WCS:fb

DEPARTMENT OF INSTRUCTION
DISTRICT GUIDANCE SERVICES

TO: Dr. William Schultheis

FROM: Ben Angel, Supervisor

DATE: September 16, 1974

RE: OBJECTIVE AND PROGRAMS 1974-75 - DISTRICT GUIDANCE AND COUNSELING SERVICES

To continue the upgrading and proper utilization of our districts' guidance and counseling staff. The following new programs, changes, improvements should help to bring us closer to our objectives.

1. JOB DEVELOPMENT

On August 31, 1974 we were advised that the Nassau County Youth Board has extended our grant for the Youth Employment Service of Levittown. The grant will continue to pay for two full-time and some part time workers who will help find jobs for our work bound students. Our school Registrars, and Counselors will continue to work closely with YES on Job Placement.

2. CAREER EDUCATION - ELEMENTARY GRADES

During the summer we worked with Miss Rose Auteri of the Northside School and with two of her teachers in the development of lesson plans for career education. These have been completed and will be distributed to all elementary schools shortly.

3. DISTRICT TESTING

Changes in the district-wide testing program have continued according to plan.

(a) we have introduced machine-scoring for the Grade 3 PEP program

(b) we have introduced a complete program of diagnostic and post-testing which should serve to up-grade instruction and remediation. Guidance has worked cooperatively with the District-wide Test Committee and particularly with the Math and Language Arts Supervisors

4. IN-SERVICE TRAINING

(a) last year Guidance offered an in-service course on Small Group Instruction. This fall we plan to offer a course entitled The Exceptional Child. The course will concentrate on the problems of the handicapped and the gifted student. Members of other Pupil Personnel Services will help to conduct the class for teachers and specialists.

(b) District meetings of all guidance personnel will continue as in the past for purposes of coordination and in-service training.

5. GROUP GUIDANCE

We will continue with our group guidance programs as in the past. These have been most successful.

6. ADULT EDUCATION

Guidance personnel will be offering a program on the High School Curriculum, and another evening program on College Financial Aid. In addition, the Evening Guidance and Counseling Center will continue to function and provide counseling for adults who need assistance in educational, vocational, and career planning and advancement.

7. Collection, Maintenance, Use, Dissemination and Disposition of Pupil Records.

In anticipation of new federal guidelines, a new statement has been written subject to approval. This work has been done in cooperation with the other Pupil Personnel Services.

8. COURSE CATALOG

We should plan to revise our district course catalog. The new edition will cover 1975-1977.

9. ARTICULATION AND ORIENTATION

Last year we introduced our new carbonized Articulation Form for district use. These have been an improvement on our previous system. Small group meetings continue to be held between guidance and students and parents of the elementary schools. There is still need for better articulation between Grades 9 and 10 (Salk-MacArthur). Some headway has been made during the past year. Department Chairmen and Guidance personnel from MacArthur have visited with their counterparts at Salk. Counselors conducted better small group meetings at Salk.

DEPARTMENT OF INSTRUCTION
GUIDANCE AND COUNSELING SERVICES
LEVITTOWN PUBLIC SCHOOLS

MEMORANDUM SHEET:

To ROSE AUTERI, PRINCIPAL - NORTHSIDE SCHOOL

From BEN ANGEL, SUPERVISOR

Date SEPTEMBER 12, 1974

Subject CAREER EDUCATION RESEARCH AND CURRICULUM DEVELOPMENT

I have reviewed the Career Awareness Program developed by you and your staff during the summer months. The format is excellent. I am having enough copies made so that teachers of Grade 3, 4, 5, 6 in each of our elementary schools can begin immediately to use the lesson plans.

Congratulations on an important contribution to our districts' Career Education Program.

Ben Angel

cc: Dr. Robert Neidich, Sup't of Schools
Dr. William Schultheis, Ass't Sup't for Instruction

DEPARTMENT OF INSTRUCTION
LEVITTOWN PUBLIC SCHOOLS

TO: Dr. Robert Neidich
Board of Education

FROM: William C. Schultheis

DATE: January 6, 1975

SUBJECT: CAREER EDUCATION MATERIALS

I commend to you the enclosed publication, "Career Education." (See Mr. Angel's attached memo of January 6, 1975).

We hope to spread the impact of this work through the elementary schools, to help children develop an earlier and more definitive awareness of the world of work.

"Career Education," our own product, is one more excellent example of low-cost, locally produced, staff-initiated innovation which helps Levittown keep stride with promising educational practices of the future.

WCS:fb
cc: Mr. Ben Angel
Miss Rose Auteri

[illegible]

MEMORANDUM SHEET

To Dr. William Schultheis

From Ben Angel

Date January 6, 1975

Subject CAREER EDUCATION - Grades 3,4,5,6

I am submitting copies of the new publication on Career Education.

This work has been developed through the cooperative efforts of Anne Byrne, Elaine Marzullo McCoy (teachers at the Northside School) Rose Auteri, Principal and myself. Particular credit is due Miss Auteri who gave much of her time, effort, and writing to make the project successful.

Miss Auteri and I would like to make a presentation to the Elementary Principals' Council so that we may expand this program to all of our elementary schools.

cc: Dr. R. Neidich
R. Auteri

APPENDIX B

VIDEO TAPE RECORDING

This video tape recording was made at the Northside School, Levittown, New York. It shows some of the ways that teachers have integrated and implemented Career Education concepts into their program. The four experimental classes are represented in this video tape recording.

The use of the video tape recording is one means for disseminating information about the Career Awareness Program within the district and within the community.

APPENDIX C

MEMORANDA RELATED TO CAREER EDUCATION IMPLEMENTATION

SUPERINTENDENT'S BOARD REPORT

A MONTHLY REPORT ON THE
LEVITTOWN BOARD OF EDUCATION
MEETINGS FOR THE INFORMATION
OF THE ENTIRE SCHOOL DISTRICT
STAFF AND COMMUNITY LEADERS

REGULAR MEETING

JONAS E. SALK JUNIOR HIGH SCHOOL CAFETERIA
WEDNESDAY, JANUARY 8, 1975

PRESENTATIONS TO THE BOARD

The following outstanding students were presented to the Board of Education:

Foreign Language

Kathy Beck - Jonas E. Salk Junior High School
Cheryl Brower - Gen. Douglas MacArthur High School
Patricia Crumley - Division Avenue High School
Lida Garcia - Wisdom Lane Junior High School
Vanessa Lodico - Levittown Memorial High School

Sports

Allan Kilfoyle - Cross Country - Division Avenue High School
Fred Lipsky - Cross Country - Division Avenue High School
Bruce Petersen - All County Soccer - Gen. Douglas MacArthur HS

Mr. Murray Hoffman, commenting for the Board of Education, indicated that he particularly enjoyed the foreign language presentations and again wished to note that youngsters who are presented to the Board of Education for excellence in one area usually are able to demonstrate significant accomplishments in various other areas.

Mr. Hoffman also congratulated the outstanding athletes noting that a balance between athletics and academics is important to a school system.

Mr. Herman Grau noted that he appreciated the kind remarks of the students and indicated that, in his opinion, outstanding accomplishment of this type does not just happen but that it occurs as a result of dedication and effort of students, parents and school staff.

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SUPERINTENDENT'S REPORTS

1. Monthly Department of Instruction Report.

   A copy of report attached for your information.

2. Mr. Stanley Greenstein, Coordinator of Cooperative Education, rendered a verbal report accompanied by slides pertaining to the various work-study programs in which he has placed youngsters in the school district.

PUBLIC BE HEARD

1. Mrs. Marge Goldberg, 1282 Allen Drive, Seaford, speaking as President of Special Education PTA, commended the Superintendent; Dr. Frank Fusco, Principal of Abbey Lane School; Mr. Paul Lochner, Coordinator of Special Education; and the Board of Education for the planning and implementation which has taken place in improving the shop-vocational skill areas for the TMR program at the Abbey Lane School.

2. Mrs. Doris O'Kane, 216 Tally Lane, Wantagh, speaking as a parent, reviewed previous correspondence with school district administrators relating to education for the gifted and posed a whole series of questions pointed at emphasizing the need for increased attention to the education of the gifted.

3. Mr. Jino Masone, 29 Woodpecker Lane, Levittown, speaking as a resident of the community, spoke about the establishment of an OTB betting facility at the May's Shopping Center indicating that certain segments of the business community did not agree with the Board of Education that such a facility would be detrimental.

BOARD MEMBERS REPORTS

1. Mr. Don Watkins noted that he appreciated receiving the Career Education report which he characterized as a thorough job and that the Board of Education should have an opportunity to review same in detail at a study session.

Mr. Watkins also noted that he was pleased to note the cooperation of the school district with Baylor University which had requested the loan of DiVinci material.

Mr. Watkins further indicated his appreciation of the report from Dr. Frank Fusco and Mr. Paul Lochner pertaining to the TMR program.

In conclusion Mr. Watkins requested that the Board of Education discuss vandalism at a study session.

2. Mr. Murray Hoffman noted that he appreciated receipt of the material relating to the Gallup poll which he felt should be discussed and reviewed by the Board of Education at a study session with particular emphasis on the section on student goals.

3. Mr. Martin Adams noted that he had just been informed that the Parent Education Committee of the Levittown PTA Council is planning a district-wide program on vandalism in the near future.

   Further, Mr. Adams commended Miss Rose Auteri, Mrs. Anne Byrne, Mrs. Elaine McCoy and Mr. Ben Angel for the fine job on the Career Education report.

   Mr. Adams commented on the security report recently received by the Board of Education noting that there seemed to be more than 100 separate instances and he was extremely concerned about the cost to the district and asked that the vandalism report be condensed and distributed to the residents of the district so that they become aware of the great waste involved.

4. Mr. Timothy H. Smith also commended those responsible for the Career Education material. He wished to give particular emphasis to the first portion of the introduction containing remarks made by Sidney Marland, former U. S. Commissioner of Education and Ewald Nyquist, N. Y. S. Commissioner of Education as follows:

> "Career education is designed to make education more relevant in the lives of our young people. Educational experiences, curriculum and instruction should be geared to eliminate what Sidney Marland called the 'artificial separation between things academic and things vocational.
>
> Dr. Ewald Nyquist, New York State Commissioner of Education, has stated that:
>
> '...we must realize that education must prepare children for work that may not exist today, and whose nature 30 or 40 years hence cannot even be imagined. This can only be done by teaching how to learn.'"

5. Mr. Michael Balas also expressed great concern and dismay at the cost of vandalism noting that this school district could ill afford the waste of resources or the danger involved.

   Mr. Balas also expressed appreciation that this district was sharing its art collection with Baylor University.

   Further, Mr. Balas noted with chagrin that the resolution setting

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forth the Board's position on OTB, which had been sent to top county officials, had been responded to by lower level county employees.

Also, Mr. Balas reported on his attendance as Levittown School District representative to the BOCES Liaison Committee noting that the BOCES Board of Education seems anxious to clear up any misunderstandings which may exist. He further mentioned that he had requested, in writing, a full copy of the BOCES budget and administrative table of organization and that during the meeting he had reflected to those present the concern in this community over the high costs involved with BOCES programs.

6. Mr. Herman Grau wished all a happy and healthy New Year.

AGENDA ITEMS

1. The Board of Education set Sunday, June 22nd, 2:30 P. M., as the date and time for senior high school commencement.

2. Gifts of art work were accepted from Mr. C. Ross Clemmensen and A-V supplies and carpeting from Gardiners Avenue PTA, as well as a plaque in memory of Mrs. Eleanor K. Brownell from the Cherrywood PTA.

SCHEDULES

....Purchase schedules were approved for $91,000.

....Resignations were accepted from three teachers, two custodians, two clerical workers, two teacher aides, two school monitors.

....Appointments were made to five instructional positions, 55 adult education instructors, two Title I staff members, one teacher aide.

....In accordance with the teacher contract the tenure schedule, involving 12 staff members, was accepted by the Board with action postponing same until the March meeting.

....One teacher was granted a leave of absence, three organizations were approved for building use and tuition for five youngsters to attend BOCES schools was approved.

***

The meeting was adjourned at 11:20 P. M.

***

Next Board Meeting - Wednesday, February 5, 1975, at 8:30 P. M.
Jonas E. Salk Jr. High School Cafeteria

Encl-Dept. of Instruction Report

DEPARTMENT OF INSTRUCTION
LEVITTOWN PUBLIC SCHOOLS

TO: Dr. Robert Neidich

FROM: William C. Schultheis

DATE: January 2, 1974

SUBJECT: MONTHLY DEPARTMENT OF INSTRUCTION REPORT

I. TURKISH EDUCATOR VISITING LEVITTOWN

Miss Turkan Baydar, Turkish educator and host-nation coordinator for the U. S. Dependent Schools in Turkey, will visit Levittown's sixth and ninth grade classrooms from January 20-31, as part of a continuing program to introduce students to the many cultures of the world.

Miss Baydar, educated in Turkey and the United States and past principal of Ankara Girls' College, will talk with students about Turkey's culture, history, language, and strategic importance in the Middle East. She will bring filmstrips, music, written materials and Turkish artifacts to illustrate her working sessions with sixth and ninth graders. No stranger to American youth, Miss Baydar has worked for the past ten years with children of U. S. military and diplomatic personnel in our American schools in the Middle East and Mediterranean areas.

Miss Baydar's two-week visit will be coordinated by Mr. Trezza, Social Studies Coordinator. In conjunction with the January 20-31 Turkish program, Mr. Cetnarowski. Art Supervisor, has organized a Turkish exhibit at the district's museum at the CAS Center.

II STUDENT WORK EXPERIENCE PROGRAM IN LEVITTOWN SCHOOLS

More Levittown High School students than ever are earning credits toward their diplomas by working at paid jobs. This year we have in our three high schools 217 students that are enrolled in Work Experience Programs that take

- over -

them out of school and into the "real world" to perform such responsible jobs as machinist, optical technician, bank teller, computer operator, medical secretary, florist, auto mechanic, switchboard operator, site planner and many, many more of comparable stature. These are our students proving themselves and our school system in the adult world.

Four specific kinds of work opportunities are being supervised by Mr. Stanley Greenstein, who serves as coordinator of cooperative education and work experience programs. These include STEP (School-To-Employment-Program), with 63 students under 16 presently enrolled; General Work Experience, for 62 students 16 and over; Diversified Cooperative Education (CO-OP), now in its second year with 78 students; and Special Education Work-Study, enrolling 14 students.

Our program's emphasis is on jobs with a future. Our placements are not for "gophers" or sweepers, although at times a student may be called upon to do that sort of thing, but rather for meaningful training slots that will lead to a future if the student elects to pursue that avenue. In any case, a student that leaves our CO-OP Program will have an entry level skill that he has developed while in attendance in our schools through the participation of concerned employers.

A full report, prepared by Mr. Greenstein, titled "Bridging the Gap Between School and Work," (previously distributed to Board of Education) outlines in detail the statistics and goals of our program. A slide presentation by Mr. Greenstein, at January 8 Board of Education meeting, will highlight this highly-commendable effort.

PRESS RELEASE

LEVITTOWN UNION FREE SCHOOL DISTRICT

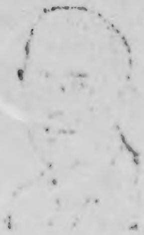
RELEASE: February 28, 1975

CONTACT: Mrs. Augusta Nix
520-5559

CAREER PURSUIT BEGINS IN ELEMENTARY SCHOOL .

Northside Elementary School hosted two professional bowlers and a singer as part of a career awareness program. Johnny Petraglia and Dave Davis were in town to participate in the Professional Bowlers' Association's Long Island Open--a stop in the 16 week televised tour of the PBA. Peter Lamengello is a singer who has appeared on the Johnny Carson Show and several others, and who lives on the Island. After the professionals gave a presentation of their careers, giggling children besieged them for autographs. Teacher Marjorie Proujansky says these career programs are particularly valuable for elementary school children. "We are finding that kids are no longer involved in the economics of the family. When parents leave for work, these children really have no understanding of what their parents do at 'work'. Through these programs, children gain a greater understanding of what 'work' may be like. The children also gain increased self-awareness and become more realistic in the evaluation of their own abilities.

L.I Press · 2/24/75



Bowler's corner

LI Open puzzling

By DICK CARMODY

Even though the pros disappointed with their inability to fire big scores, the PBA Long Island Open is providing excitement at Garden City Bowl this week because no one can run away and hide from the rest of the field.

Only five men managed to hit at a 210 or better clip through the 18-game preliminary round which wound up yesterday afternoon. And for the first time in seven years, it took less than a 200 average to advance to match play in a PBA tournament. Bob Chappell of Wichita, Kan., and Marshall Holman of Medford, Ore., both averaged 199 as they placed 23rd and 24th, respectively.

The last time the qualifying score dipped under a 200-average was way back in 1968 at Montreal when it fell to 4788 for 24 games. That was for a 16-man field. Since the 24-man field was instigated about four years age, the previous low was 201 AT Winston-Salem, N.C., in 1972.

When Fred Connor of Mor Vista, Calif., rolled a 290 game in the last qualifying block yesterday, one of his fellow touring pros exclaimed, "That should make him an instant Hall of Famer."

But with all the moaning and groaning about low scores among the pros and the diehards, the fans had the best of it. Only seven pins separated the top three semifinalists going into last night's match play. There were less than 300 pins between first and 24th and the righthanders only outnumbered the lefthanders by two, 13-11.

Scores made a noticeable jump last night, basically because the survivors were the man best able to adapt to the lane conditions. But no one is going to run away because it's almost impossible to register consistent high games.

You can take proprietor Buddy Russell's word for it that things will be different at GC Bowl by the time a new season comes around in September. "We are going to do the lanes over completely this summer," he said last night. "I don't care what it may cost, we are going to provide the best conditions possible as soon as it can be accomplished."

• • •

THE ANNOUNCEMENT isn't due until tonight at the Long Island Open, but we hear that Earl Anthony is PBA Player of the Year and 22-year-old Cliff McNealy of San Lorenzo, Calif., is Rookie of the Year in the annual poll conducted by the Sporting News among the 1,250 members of the PBA.

• • •

DAVE DAVIS, Johnny Petraglia and Pete Limongello (Mike's talented singing brother) took time out from their chores at the Long Island Open to conduct a "career opportunities" seminar for the students at North Side School in the Levittown school district yesterday.

Principal Rose Auteri was ecstatic over the program which she called one of the best ever held at this educational level in the area.

DEPARTMENT OF INSTRUCTION
LEVITTOWN PUBLIC SCHOOLS

TO: Dr. Robert Neidich

FROM: William C. Schultheis

DATE: October 1, 1974

SUBJECT: MONTHLY DEPARTMENT OF INSTRUCTION REPORT

I. FALL 1974 PROFESSIONAL IN-SERVICE COURSES

The district will offer eight in-service courses beginning the week of October 7 (detailed announcements have been forwarded to Board of Education). They include:

A. Alcohol and Alcoholism
This course, vital to a teacher's understanding of contemporary youth culture and its drug of first choice, will cover physiological, psychological, and sociological implications, teen-age and adult drinking, the educator's role in prevention, and available community treatment resources.

B. Individualizing Instruction in Social Studies
The main purpose will be to expose Social Studies teachers to optional methods and strategies in teaching, as secondary schools move from traditional group tracking. Emphasis will be on demonstrating techniques and models to enable teachers to prepare learning packets, contracts, and small-group learning units.

C. Production of Audio-Visual Materials Science K-12
Topics included are production of filmstrips, photomicrography, use of classroom VTR, Slide production, and instruction card development. These skills are basic to individualization emphasis in science curriculum.

D. Technology in the Classroom
Two faculty members who have taken Stony Brook ECCP coursework (Man-Made World) will present wide range of interdisciplinary materials covering effects of society technology on society. Topics will include noise pollution, energy crisis, and computerization.

E. The Exceptional Child
This seminar will consider identification of the exceptional child, slow learner, gifted, emotionally disturbed, and physically handicapped, with emphasis on dealing with exceptional children in regular classrooms. This course will strengthen teacher skills as exceptional children are increasingly mainstreamed in total school setting.

F. Creative Crafts
Classroom teachers will learn to use traditional and experimental materials as stimulation to development of varied and appropriate classroom environment. Recycling of easily available "waste" materials will be emphasized.

G. Communications Skills Workshop
This workshop, a study of human relations and interaction, teaches counseling and listening skills, how to improve classroom environment and increase teacher awareness of children's problems and needs.

H. Introduction to Computer Programming Using BASIC
The course includes hands-on experience with our expanding Levittown Computer System and should give junior high math teachers preparation for initiation of computer instruction in grades 7-9.

Total cost for all of above courses is $1,155, due to use of coordinators and supervisors as instructors, and to free availability of instructors through the Town of Hempstead for Communications Skills Workshop.

II. CURRICULUM GOALS AND OBJECTIVES 1974-75

Curriculum planning for the coming school year has been reported to the Assistant Superintendent for Instruction, using outlines of specific plans, goals, and objectives. (These outlines from all supervisors and coordinators have been prepared in detail and forwarded to the Board of Education.) Selected curriculum emphases and high-priority projects include:

A. Complete plans for course in Licensed Practical Nursing, to start in 1975-76.

B. Complete revision of TMR curriculum; establish a work-study program for TMR students by September, 1975.

C. Develop parent groups led by school psychologists to help parents better understand and help children adjust to school life.

D. Expand career education units in elementary grades, using materials developed by staff during summer 1974.

E. Emphasize special education students in speech and hearing screening 1974-75.

F. Work to improve success rates of student weight control programs; revise Health Services Manual.

G. Complete conversion of remaining traditional libraries to multi-media resource centers.

H. Implement the newly-revised ninth grade science laboratory investigation curriculum.

I. Complete and distribute a criterion-referenced mathematics program, WELD II, for elementary teachers.

J. Implement units and activities of newly-revised seventh grade Health curriculum.

K. Put into action newly-approved volunteers (VOLS) program.

L. Establish elementary-level Social Studies Council to work towards unification and improvement of Social Studies program; develop comprehensive inventory of all Social Studies texts, materials, etc. now in use.

M. Expand exhibits and involve art students in CAS Center programs.

N. Develop and refine General Music guide for grades 7-8 completed during summer 1974.

O. Implement prescriptive-diagnostic reading improvement system in grades 2-8.

WCS:fb

agenda

ELEMENTARY PRINCIPALS' MEETING

BUSINESS OFFICE CONFERENCE ROOM, 9:30 A.M. March 26, 1975

I. 9:30 A.M. CAREER EDUCATION REPORT

Miss Auteri
Mr. Angel

II. 10:30 A.M. PHYSICAL EDUCATION STAFFING PROPOSAL

Mr. Lynch
Mr. McMillan

III. F.I.T.E.

A. Wednesday, April 30th - 2:00 P.M. EPC and elementary physical education staff.

B. Contributions to national elementary principals' conference.

the GIST

ELEMENTARY PRINCIPALS

LEVITTOWN - - NEW YORK

BUSINESS OFFICE CONFERENCE ROOM, 9:30 A.M. March 26, 1975

I. NORTHSIDE CAREER EDUCATION PROJECT REPORT

A. Two Northside teachers have worked during summer 1974, as planning for now-operating career education program with grades 3-6 Northside students.

B. Miss Auteri and Mr. Angel explained the materials developed, and shared copies with EPC members.

C. A short video-taped presentation emphasized use of above materials, presented by teachers and a guidance intern presently assigned to Northside. Students use task cards, small group discussion, and kit materials to explore occupations and vocational decision-making.

D. An in-service course in career education for elementary teachers will be offered in Fall 1975, to help expand program into other Levittown elementary schools.

II. PHYSICAL EDUCATION STAFFING PROPOSAL 1975-76

Mr. Lynch and Mr. McMillan distributed staffing proposal for EPC consideration. Enrollment decline indicates excessing of one physical education teacher, with 15 staff needed for 1975-76. Charts and statistics presented, designed to indicate equitable time allotments, were met by group consensus.

A special EPC-elementary physical education staff meeting is called for Wednesday, April 30, at 2:00 P.M. Agenda will follow.

- over -

Levittown
Union Free
School District

DR. WILLIAM C. SCHULTHEIS
ASSISTANT SUPERINTENDENT
FOR INSTRUCTION

March 26, 1975

Dr. Anna Rockhill
Kramer Lane School
Bethpage, New York

Dear Ann:

Enclosed are two publications from Levittown for use as you see fit at the Nassau County Elementary School Principals' Association.

We are proud of both. We can send you a dozen more good things from Levittown, but we don't want to over-power the nation in Minneapolis.

Sincerely yours,

Bill

William C. Schultheis

WCS:fb
Encs.:
An Interdisciplinary Guide to Just Beyond the
    Classroom Activities
Career Education

cc: Mr. Forsyth
    Miss Auteri
    Mr. Angel
    Mr. Fremed

DEPARTMENT OF INSTRUCTION
LEVITTOWN PUBLIC SCHOOLS

TO: Dr. Robert Neidich

FROM: William C. Schultheis

DATE: April 4, 1975

SUBJECT: MONTHLY DEPARTMENT OF INSTRUCTION REPORT

I. SUPERINTENDENT'S CONFERENCE DAY APRIL 16

All planning is completed for our Spring Conference, with "The Future is Now" as theme. (Program previously distributed to Board of Education.)

Morning speakers include Dr. Robert Samples, of ESSENTIA, whose topic is "Synergic Education - The Hopeful Side of 1984," and Dr. George Bereday, of Columbia Teachers College, who will discuss "The School of the Future."

Afternoon workshops include follow-up sessions with Dr. Samples and Dr. Bereday; and interest sections on elementary innovations, mathematics materials, counseling for individualized instruction, adaptive physical education, semantics, and future directions of English education. Selected educational films will be presented at both A.M. and P.M. sessions.

II. EXEMPLARY LEVITTOWN SCHOOLS CURRICULUM PUBLICATIONS

Two outstanding, locally-produced publications have been forwarded to the National Association of Elementary Schools Principals for display at their national conference in Minneapolis in April, 1975. They are:

A. "An Interdisciplinary Guide to Just Beyond the Classroom Activities," a publication jointly developed by Lee Road and BOCES, which describes and takes advantage of the Lee Road site as stimulus for student ecological and environmental study.

- over -

B. "Career Education," developed by Northside staff as guide for intermediate grade career awareness and exploration units.

The above publications (previously distributed to Board of Education) are outstanding examples of locally-developed and economical curriculum materials involving cooperative efforts of our faculty, administration, and supervisory staff.

III. SECONDARY PRINCIPALS-SUPERVISORS MINI-CONFERENCE MARCH 20-21

Twelve supervisors and principals have completed a productive 24-hour work session on March 20-21, at Gurney's Inn, Montauk. Topics included patterns of effective cooperation between building principal and supervisor, long-range planning and strategies for curriculum development, and mutual staffing and personnel problems.

Conference evaluation by participants indicates strong positive reaction to concept of short conference in a retreat setting, where participants live and work together away from school district. (See conference summary already distributed to Board of Education). After ALSA contribution to conference expenses, cost to the district was $141.00.

IV. NON-RESIDENT STUDENT TUITION SURVEY

With the joint cooperation of Department of Instruction staff, census coordinator, and school attorney, a strong effort is under way to determine actual number of legally non-resident students presently attending Levittown schools without paying required tuition. Approximately 70 such cases have been reviewed, with letters from the Superintendent sent out to indicate status of student and tuition owed.

In several cases, this procedure has encouraged formal adoption or guardianship action by residents involved. In other cases, student will not be re-admitted for 1975-76. Also, admission procedures for new entrants will be tightened up for 1975-76, and the district may realize some additional income from tuition due.

V. SPRING 1975 EXTENDED FIELD TRIPS

Three high school extended field trips were successfully completed during Spring recess:

A. Mexico (Mexico City, Taxco, Acapulco), March 26-April 1 - seven Division Avenue High School students, with Mrs. Miranda, Spanish teacher as advisor. Students had the opportunity to use their skills in the Spanish language, visit silver mines, and tour sites of cultural interest.

B. Paris-London, March 28-April 6 - twelve MacArthur students, accompanies by Mr. Gallagher and Mr. Rosenblum of MacArthur faculty. After flight to Paris and visit there, students took boat to London, for London visiting. Scheduled were educational tours to Versailles, Chartres, Loire Valley, and London sightseeing.

C. Florida, March 24-April 2 - fifteen members of MacArthur baseball team, accompanied by Mr. DiMaggio, MacArthur baseball coach, and Mr. LaPolla, MacArthur physical education chairman. The team visited St. Petersburg Little League Complex, scrimmaged other Long Island high school teams there (including Longwood, Westbury, Commack South, Babylon), visited several colleges, and enjoyed Florida's recreational attractions.

Detailed reports of all three trips are being prepared by trip sonsors, after appropriate recovery time from twenty-four hour extended supervision of enthusiastic student participants.

APPENDIX D

TTCT FIGURAL A AND B

Due to copyright the contents of Appendix D have been removed from this document. These consisted of Booklet A and Booklet B of 'Thinking Creatively with Picture', by E. Paul Torrance. Available from Personnel Press (a division of Ginn and Company), Lexington, Mass.

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APPENDIX A

CAREER AWARENESS: One Means for Meeting the Changing Role of Education

by: Rose Mary P. Auteri
1816 Thomas Street
Merrick, New York 11566

Old Westbury Cluster

Submitted in partial
fulfillment of the
requirements for the degree
of Doctor of Education,
Nova University.

1975

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LEVITTOWN UNION FREE SCHOOL DISTRICT
Levittown, New York

MAY 29 1975

Board of Education

Herman Grau, President

Martin Adams, Vice-President

John J. Donaldson

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Michael Balas, Secretary

Murray Hoffman

Don O. Watkins

Robert E. Neidich
Superintendent of Schools

William Schultheis
Assistant Superintendent of Schools

Rose Auteri
Principal, Northside School

Ben Angel
Supervisor, Guidance and Counseling Services

CAREER EDUCATION

GRADES 3, 4, 5, 6

Anne Byrne, Teacher
Elaine Marzullo McCoy, Teacher
Northside School

Rose M. Auteri, Principal

Ben Angel, Supervisor
Guidance and Counselling Services

LEVITTOWN PUBLIC SCHOOLS

LEVITTOWN, N. Y.

1974

CG 010 032

NORTHSIDE SCHOOL
Levittown, New York

This guide is color coded.

The objectives for each concept are developed for each grade:

Yellow	represents	Grade	3
Pink	"	"	4
Blue	"	"	5
Green	"	"	6

The lesson plans in the appendix are also color coded, and follow the above color system.

INTRODUCTION

Career education is designed to make education more relevant in the lives of our young people. Educational experiences, curriculum and instruction should be geared to eliminate what Sidney Marland called the 'artificial separation between things academic and things vocational'.

Dr. Ewald Nyquist, New York State Commissioner of Education, has stated that:

> "... we must realize that education must prepare children for work that may not exist today, and whose nature 30 or 40 years hence cannot even be imagined. This can only be done by teaching how to learn."

Career awareness and career education are building blocks in the process of learning and doing.

The material in this guide has been prepared for use by the Levittown Public Schools. The concepts may be presented in sequence or integrated into existing programs and disciplines.

This project was carried on during the summer of 1974 as part of the summer curriculum development program. Teachers were consulted regarding the concepts to be developed, and the general needs of students. Their recommendations have been incorporated in this work.

It is anticipated that the Levittown schools and community will be recipients of the total effects of this program. Children who have a meaningful awareness of self will become more self directive in their choice of activities for now and the future. Schools must support students in their quest for an understanding of the labor market. It is, therefore, necessary to develop career informational models for this purpose.

NORTHSIDE SCHOOL

Levittown, N.Y.

CAREER EDUCATION CONCEPTS

1. People are different. A realistic understanding of self, others and environment will influence career decisions.
2. Career development is a life long process which begins in the early school years.
3. There is a relationship between learned skills and future life.
4. People work for many reasons.
5. All kinds of work are interdependent, have dignity and importance.
6. People must learn to adapt to changes brought about by technology and society.

NORTHSIDE SCHOOL
Levittown, N.Y.

Problem Solving and Decision Making Skills are a necessary component in this CAREER AWARENESS PROGRAM.

These situations are built into all of the activities listed for each student performance objective.

The teacher will reinforce the following problem-solving concepts through instruction and guidance.

1. Children will identify the components of problem-solving process.
    a. identify problem
    b. assess problem
    c. consider alternative solutions
    d. choose a best plan
        1. a second best plan
        2. work out details of both plans.
    e. try selected plan, evaluate, make needed changes.
2. Children will apply the problem-solving process to school related problems.
3. Children will apply the problem-solving process to several problems, i.e., communication, economics, survival problems.
4. Children will apply the problem-solving process in the study of careers and life-styles.

NORTHSIDE SCHOOL
LEVITTOWN, N. Y.

STUDENT PERFORMANCE OBJECTIVES

1. Children will achieve the following objectives related to SELF-AWARENESS.

   A. 1) Children will gain knowledge that makes up self interest.
      2) Children will gain knowledge of personal capabilities and limitations.
      3) Children will gain knowledge that background and family influence personal values.

   B. Children will recognize the importance of self as an individual and as a member of a group.

   C. Children will recognize that career selection is related to personal capabilities, limitations, talents and interests.

2. Children will achieve the following objectives related to attitudes.

   A. Children will demonstrate by their attitude rights and responsibilities to self, family, school and community.

   B. Children will recognize what is required for human beings to get along with each other.

   C. Children will recognize that school is a career that requires proficiency in specific areas.

   D. Children will perceive educational skills as determinants of future life.

   E. Children will understand the relationship between learned skills and life roles.

   F. Children will develop an appreciation of wage earners occupation and his importance to the family.

3. Children will achieve the following objectives related to skills.

   A. Children will be able to match necessary skills with career areas.

   B. Children will relate social and personal interaction skills to employability.

   C. Children will develop an awareness of the consequences of personal decisions.

NORTHSIDE SCHOOL
LEVITTOWN, N. Y.

STUDENT PERFORMANCE OBJECTIVES

4. Children will achieve the following objectives related to work roles.

   A. Children will acquire a realistic view of the working roles i.e., all careers have advantages and disadvantages.

   B. Children will develop an appreciation for all work.

   C. Children will recognize the interaction of careers and life styles.

5. Children will achieve the following objectives related to Interdependence.

   A. Children will understand that specialization creates an interdependent society and should benefit society.

   B. Children will appreciate the dignity of work.

6. Children will achieve the following objectives related to change.

   A. Children will recognize that people should adapt to technological changes.

   B. Children will recognize that social change creates or eliminates work.

NORTHSIDE SCHOOL
LEVITTOWN, N.Y.

TEACHER'S CAREER AWARENESS WORK SHEET-Objective and Related Activities

LEVEL 3 CONCEPT #1 OBJECTIVE # 1-a.1.

Career Awareness Objective: Children will achieve knowledge that make up self-interests.

Suggested Activities

Language Arts:

1. Have children collect from the newspapers "help wanted ads," cut out the ad that is most interesting, paste on a personal interest chart.
2. Help children compose a Want Ad, using the skills they know. Their Want Ad Job Application can be put on a bulletin board or in a class newspaper.

Social Studies:

1. Have children make a list of "Things I Like to Do," "Things I Know How to Do," "Places I Like to Visit." Instruct children to put them on a 3x5 card. Example:

Name Age

I Like to:
paint
play baseball
collect shells

I Know how to:
swim
sing
cut grass

I would like to visit:
a farm
an office building
a bank

Evaluation

Teacher Comments

Recommended Changes

NORTHSIDE SCHOOL
Levittown, N.Y.

TEACHER'S CAREER AWARENESS WORK SHEET-Objectives and Related Activities

LEVEL 1 CONCEPT # 1 OBJECTIVE #1-a-1

Career Awareness Objective: Children will gain knowledge that makes up self interest.

Suggested Activities	Evaluation
Language Arts:	Teacher Comments:

1. OPEN-END SENTENCES. The following open-end sentences might be used for group discussion, or as topics for drawings, or writing paragraphs.

   a) The most important thing about me is-------
   b) The thing I like best about myself is-----
   c) The thing that bothers me most about myself is-----
   d) One way that I have changed since last year is------
   e) One thing I would like to understand about myself is----
   f) One thing that makes me different from anyone else is-----
   g) If others could see me the way I see myself, they would---

Recommended Changes:

NORTHSIDE SCHOOL
Levittown, New York

TEACHER'S CAREER AWARENESS WORK SHEET- Objectives and Related Activities

LEVEL 6 CONCEPT #1 OBJECTIVE #1-a.1

Career Awareness Objective: Children will gain knowledge that makes up self-interest.

Suggested Activities	Evaluation
Language Arts:	**Teacher Comments:**

1. CONSTRUCT: Photoboards that are related to self-interests. They will be later used to stimulate discussion, for role play, for writing paragraphs or short stories.
   1. Boy daydreaming in class.
   2. Girl standing in front of an unmarked door.
   3. Boy and Girl sitting on floor in an empty room.
   4. Man listening to child's problem.
   5. Two girls laughing.

Recommended Changes

NORTHSIDE SCHOOL
Levittown, N.Y.

TEACHER'S CAREER AWARENESS WORK SHEET Objective and Related Activities

LEVEL 3 CONCEPT #1 OBJECTIVE # 1-a.2

Career Awareness Objective: Children will gain the knowledge that self makes up personal capabilities and limitations.

Suggested Activities

Social Studies:

1. DISCUSSION-Point out and discuss the fact that there are different characteristics for different jobs. All people are essentially alike, but we have different physical characteristics. Some physical characteristics a person has may make him/her more suitable for a certain occupation.

2. CHART- Make a chart showing different occupations and let the children suggest various qualifications and restrictions for various jobs. A suggested beginning is as follows: have child complete

JOB	QUALIFICATION	RESTRICTION
Construction		
model		
taxi driver		
policeman		

3. COMPARING-Have children list, as a comparision grandparents job, father and mother's jobs. Include whether the child will be doing in the future the job his/her parents do now? How does he see himself?

Evaluation

Teacher Comments

Recommended Changes

NORTHSIDE SCHOOL
Levittown, N. Y.

TEACHER'S CAREER AWARENESS WORK SHEET- Objectives and Related Activities

LEVEL 4 CONCEPT # 1 OBJECTIVE #1-a.2

Career Awareness Objective: Children will gain knowledge of personal capabilities and limitations.

Suggested Activities

Language Arts:

1. OPEN-END SENTENCES. The following open-end sentences might be used for group discussion, individual conferences, or as a topic for drawings, writing brief paragraphs.
   - a) One thing I'm able to do is-------
   - b) Something I've tried and can't do very well is----------
   - c) Something I think I could do if I really tried is-----------
2. Direct children to develop three original open-end sentences, to be developed later.

Evaluation

Teacher Comments:

Recommended Changes

NORTHSIDE SCHOOL
Levittown, New York

TEACHER'S CAREER AWARENESS WORK SHEET
Objectives and Related Activities

LEVEL 5 CONCEPT # 1 OBJECTIVE # 1-a.2

Career Awareness Objective: Children will gain knowledge of personal capabilities and limitations.

Suggested Activities	Evaluation
Language Arts:	Teacher Comments:

1. Abilities and Vocations work sheet-direct the children to compile vocations, jobs that they think would interest them and then find out what someone has to be able to do to perform the job.
2. Interview-some of the children could be designated to interview person involved in particular jobs, some children will be designated to use the library to identify abilities necessary for a particular job.
3. Discuss-that many necessary abilities or skills can be learned, but that some need special talent, i.e. singing. In most selections the child should not take a vocation off his list just because he lacks the ability now.

Recommended Changes:

NORTHSIDE SCHOOL
Levittown, New York

TEACHER'S CAREER AWARENESS WORK SHEET-Objectives and Related Activities.

LEVEL 6 CONCEPT # 1 OBJECTIVE # 1-A.2

Career Awareness Objective: Children will gain knowledge of personal capabilities and limitations.

Suggested Activities

Language Arts

1. CONSTRUCT Photoboards. These photoboards are to be related to abilities and limitations. They are to be used to stimulate group discussion, role play, or for writing brief paragraphs.
    1. Physically handicapped boy umpiring softball game.
    2. Angry, frustrated boy looking at bicycle
    3. Girl attempting to twirl baton
    4. Girl apparently cheating on test
    5. Boy with violin being teased by other boys.
    6. Boy attempting to rescue younger boy from tree.
    7. Children raising hands to answer teacher.
    8. Winners and losers.

Evaluation

Teacher Comments;

Recommended Changes

NORTHSIDE SCHOOL
Levittown, N.Y.

TEACHER'S CAREER AWARENESS WORK SHEET-Objective and Related Activities

LEVEL 1   CONCEPT #1   OBJECTIVE #1-a.3

Career Awareness Objective: Children will gain knowledge that cultural background and family influence personal values.

Suggested Activities

Art

1. COLLECTION OF MEDIA-Have children collect pictures of people in different countries. Present copies of famous art work by artists. These can be borrowed from the Nassau Library System (Levittown).
2. DISCUSSION AND COMPARISON-In viewing the pictures collected direct the children to look for things that are not in their own environment.

Language Arts

1. LIST-Direct the children to make a list of things they can do that other people in other places might not be able to do. Example-surfing, beach, going to the theatre. (Jones Beach Theatre)

Evaluation

Teacher Comments

Recommended Changes

NORTHSIDE SCHOOL
Levittown, New York

TEACHER'S CAREER AWARENESS WORK SHEET - Objectives and Related Activities

LEVEL 4 CONCEPT #1 OBJECTIVE #1-a.3

Career Awareness Objective: Children will gain knowledge that background and family influence personal values.

Suggested Activities

Language Arts:

1. TASTE-IN. Direct children to bring some simple foods to class tomorrow that are common in particular cultures - fortune cookies, bagels, corn bread, tortillas. Be prepared to discuss what part the foods play in the diets of various groups selected.

2. DISCUSS. "What Is My Culture?" Encourage the children to identify their own cultural background. Tally on the board the various national backgrounds represented in the class. Identify contributions these groups made to American Culture.

Evaluation

Teacher Comments:

Recommended Changes

NORTHSIDE SCHOOL
Levittown, N.Y.

TEACHER'S CAREER AWARENESS WORK SHEET-OBJECTIVES AND RELATED ACTIVITIES

LEVEL 5 CONCEPT # 1 OBJECTIVE # 1-a.3

Career Awareness Objectives: Children will gain knowledge that backround and family influence personal values.

Suggested Activities	Evaluation
Language Arts:	Teacher Comments:

1. Select children in same cultural group to express in words or writing "This Is the Way I'd Feel." if they were members of another group and were treated by others they way their adopted group is treated. For example, if the class is made up of Irish and Italians, the Irish could write about how they'd feel if they were Italians and the Italians could write about being Irish.

Recommended Changes:

NORTHSIDE SCHOOL
Levittown, New York

TEACHER'S CAREER AWARENESS WORK SHEET- Objective and Related Activities

LEVEL 6 CONCEPT #1 OBJECTIVE #1-3.3

Career Awareness Objective: Children will gain knowledge that backround and family influence personal values.

Suggested Activities

Evaluation

Teacher Comments

SOCIAL STUDIES

1. CULTURAL CONFERENCE: Workshops, and study groups, and the development of a cultural museum will be the core of the conference.

   Prior preparation for the conference will be invitations to representatives to the conference from other grades.

   Outline the activities of the conference.

   Developing literature about the conference theme. "Major Cultures in the United States of America."

   Selection of Workshop Leaders. Selection of study group leaders.

   A decision on the Cultures to be studied at this conference should be made.

   Appointment of Museum Board of Trustees and Director.

   All the children will participate as planned by the Cultural Conference Committee members. (teacher, and four students)

   (This can be an all day conference or two half day conferences.)

Recommended Changes

NORTHSIDE SCHOOL
Levittown, N.Y.

TEACHER'S CAREER AWARENESS WORK SHEET-Objective and, Related Activities

LEVEL 3 CONCEPT # 1 OBJECTIVE # 1-b.

Career Awareness Objective: Children will recognize the importance of self as an individual and as a member of a group

Suggested Activities

Evaluation

Teacher Comments

Recommended changes

Social Studies:

1. REALITY EXPERIENCE: Each child should be able to see himself as a valuable asset to the school. The children should be allowed to select a job that he/she could do to make the school nicer or to keep it as pleasant as it is. This job should be for one week. Suggested jobs are; hold doors, clean erasers, boards, stack books, open windows.

An alternative would be for the teacher to have 30 slips of paper, each having a job description of a school task. The children select one to perform for the week. These jobs can be switched every week until all have tried every job.

2. SEQUENCE: Make a job description for each classroom task the children will be working on. Have 3 steps for each one. The children must be able to put them in the correct order. For example, the board washer:

(put in order)
wash the boards,
wet the sponge,
erase the boards.

Language Arts:

3. These job descriptions should be put on sentence strips of heavy paper and pasted on a chart.

NORTHSIDE SCHOOL
Levittown, New York

TEACHER'S CAREER AWARENESS WORK SHEET - Objective and Related Activities

LEVEL 4 CONCEPT # 1 OBJECTIVE #1-b

Career Awareness Objective: Children will recognize the importance of self as an individual and as a member of a group..

Suggested activities

Language Arts:

1. OPEN-END SENTENCES. Direct children to complete open-end sentences for individual conferences, or as a topic for drawings or for writing a brief paragraph.

   a) A person who respected my feelings wouldn't-------
   b) One of my rights that some people don't respect is------
   c) One thing I do sometimes that isn't very thoughtful is----
   d) One thing I do that makes people mad sometimes is-------
   e) One thing I think is really mean is--------

Evaluation

Teacher Comments

Recommended Changes

NORTHSIDE SCHOOL
Levittown, New York

TEACHER'S CAREER AWARENESS WORK SHEET-Objective and Related Activities

LEVEL 5 CONCEPT #1 OBJECTIVE #1-b

Career Awareness Objective: Children will recognize the importance of self as an individual and as a member of a group.

Suggested activities

Language Arts:

1. DISCUSSION. Direct the children to give serious thought to the rights of every human being. Ask them to think for a few minutes about what they believe everyone has the right to do, say, think, or feel. Then ask each child to contribute a human right, list on Human Rights Chart. Discuss.
2. List on the board ways people violate rights of others. For example, borrowing your sister's bicycle without asking violates her rights, extend.

Evaluation

Teacher Comments

Recommended Changes

NORTHSIDE SCHOOL
Levittown, New York

TEACHER'S CAREER AWARENESS WORK SHEET-OBJECTIVE and RELATED ACTIVITIES

LEVEL 6 CONCEPT # 1 OBJECTIVE# 1-b

Career Awareness Objective: Children will recognize the importance of self as an individual and as a member of a group.

Suggested activities

Language Arts:

1. VOCABULARY BUILDER. Direct children to draw up a list of words and phrases related to respect, i.e. thoughtfulness, courtesy, consideration, etc. Direct children to use dictionaries to find synonyms for the words they listed and expand the list.
2. PHOTOBOARDS. Construct photoboards related to respecting the rights and feelings of others. To stimulate discussion, role play, or writing brief stories refer to developed photoboard.

   SUGGESTION:
   1. Girl watching men argue
   2. Boy reluctant about taking younger sister to play with him.
   3. Boys and girls of various ethnic groups.
   4. American Indian girl showing Indian Artifacts to her friends.

Evaluation

Teacher Comments

Recommended Changes

NORTHSIDE SCHOOL
LEVITTOWN, N.Y.

TEACHER'S CARRER AWARENESS WORK SHEET-Objective and Related Activities

LEVEL 3 CONCEPT #1 OBJECTIVE # 1-c.

Career Awareness Objective: Children will realize that career selection is related to personal capabilities, limitations, talents, and interests.

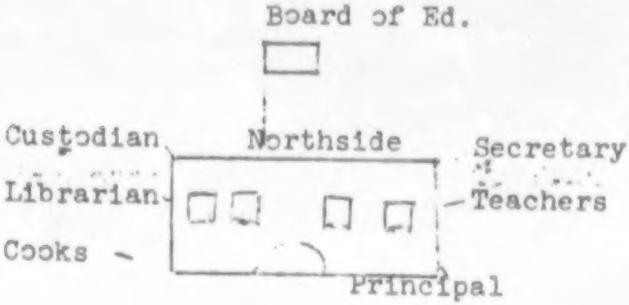
Suggested Activities

Art:

1. Using stick puppets to portray workers, the children can enact an original skit, "Who Runs My School." Children can speculate on what would happen if one of "cast" did not do his job.

Social studies:

1. Tour school to meet the school personnel and vaguely get acquainted with their jobs-team effort involved.
2. Make a map of the school and locate area of each worker.
3. Bulletin Board: Construct a bulletin board display of school personnel.



Evaluation

Teacher Comments

Recommended changes

NORTHSIDE SCHOOL
Levittown, New York

TEACHER'S CAREER AWARENESS WORK SHEET - Objective and Related Activities

Level 4　　Concept # 1　　Objective # 1-c

Career Awareness Objective: Children will recognize that career selection is related to personal capabilities, limitations, talents, and interests.

Suggested activities　　Evaluation Teacher Comments

Language Arts:

1. LETTERS: Direct children to write letters to local trade and professional organizations requesting literature concerning preparation and performance required for various jobs and why they selected their particular job.

2. RESOURCE PEOPLE: Plan for an invited professional to talk with the children about their early professional interests and training and how they advanced to their present position.

Recommended Changes:

NORTHSIDE SCHOOL
Levittown, New York

TEACHER'S CAREER AWARENESS WORK SHEET-Objective and Related Activities

LEVEL 5 CONCEPT #1 OBJECTIVE #1-c

Career Awareness Objective: Children will recognize that career selection is related to personal capabilities, limitations, talents, and interests.

Suggested Activities

SOCIAL STUDIES:

1. CHART: Construct a chart with each child's name listed. Children should write their interests, talents and skills. A comparison should be then made.

   Example:

   Name / Interest / Talents / Skills

2. DISCUSSION: The reasons why people choose different occupations can be an interesting topic to bring in interests, talents and skills and the part they place in work choice.

Evaluation

Teacher Comments

Recommended Changes

NORTHSIDE SCHOOL
Levittown, New York

TEACHER'S CAREER AWARENESS WORK SHEET-Objective and Related Activities

LEVEL 6 CONCEPT # 1 OBJECTIVE # 1-c

Career Awareness Objective: Children will recognize that career selection is related to personal capabilities, limitations, talents, and interests.

Suggested Activities	Evaluation
Social Studies:	Teacher Comments:
1. CHART: Construct a chart to bring out interest in acquired skills for jobs. Example: Interest / Skills Needed / How skill was acquired. 2. Listing: Using the "Yellow Pages", have the children find out all the professions using the specific skill indicated. 3. Grouping: Discussion could be grouped by same interest skills.	
	Recommended Changes

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NORTHSIDE SCHOOL
Levittown, New York

TEACHER'S CAREER AWARENESS WORK SHEET- Objectives and Related Activities

LEVEL 3   CONCEPT 2   Objective 2-a.

Career Awareness Objective: Children will demonstrate by their attitude-rights and responsibilities to self, family, school, and community.

Suggested activities	Evaluation Teacher Comments
Language Arts:	

1. Discuss people you know of different races and the jobs they hold responsibily.

2. List on CHART or collect pictures of tasks children do at home. Help children classify these tasks in categories:
    a. Things we do alone, for ourselves and others.
    b. Things we do together.
    c. Things that are done for us.

3. Collect pictures and discuss how every member of the family helps at home.

Recommended Changes

NOTRHSIDE SCHOOL
Levittown, New York

TEACHER'S CAREER AWARENESS WORK SHEET - Objective and Related Activities

LEVEL #4 CONCEPT # 2 OBJECTIVE # 2-a

Career Awareness Objective: Children will demonstrate by their attitude-rights and responsibilities to self, family, and community.

Suggested activities	Evaluation
Language Arts:	Teacher Comments
1. CHART: Child keeps a chart of jobs done at home. Illustrate favorite job and one he/she likes least to do. Discuss safety factors involved, i.e. putting bicycles away, drying dishes, in case of broken dish-care in handling, mowing lawn, etc. Compare with workers who help to keep us safe i.e. doctors, policeman, fireman, crossing guard, principal, etc.	
2. Write short story about how each task performance helped other members of the family, of the community, put in a personal book about Yourself.	Recommended Changes

NORTHSIDE SCHOOL
Levittown, New York

TEACHER'S CAREER AWARENESS WORK SHEET
Objective and Related Activities

LEVEL 5 CONCEPT #2 OBJECTIVE #2-a.

Career Awareness Objective: Children will demonstrate by their attitude, rights and responsibilities to self, family and community.

Suggested Activities

Language Arts:

1. Research: Investigate early industrial practices in the area of working conditions, child labor and laws that were passed to correct the abuses. Encourage children to express their attitude regarding abuses that took place.

SOCIAL STUDIES:

2. TIME LINE: Construct a time line to illustrate early events which forced the passage of certain laws to protect people's rights and enforce responsibility to the community.

Evaluation

Teachers Comments

Recommended Changes

NORTHSIDE SCHOOL
Levittown, New York

TEACHER'S CAREER AWARENESS WORK SHEET_ Objective and Related Activities

LEVEL 6 CONCEPT # 2 OBJECTIVE # 2=a.

Career Awareness Objective: Children will demonstrate by their attitude rights and responsibilities to self, family, and community.

Suggested activities	Evaluation
Language Arts:	Teacher Comments
1. Interview a labor leader or member of a professional organization in the community, to determine how professions relate responsibilty to the members of their organization, to the community. Report to class.	
2. Interview a teacher of your school to see how many belong to organizations, unions, etc. and find out what they think the best benefits are of being a member.	
	Recommended Changes

NORTHSIDE SCHOOL
Levittown, New York

EACHER'S CAREER AWARENESS WORK SHEET - Objective and
lated Activities.

VEL 3　　CONCEPT #2　　OBJECTIVE #2-b

reer Awareness Objective: Children will recognize what is required for human beings to get along with each other.

ggested Activities

NGUAGE ARTS:

1. CHART. Construct a chart "What if...?"
    a. You play out after dark.
    b. You stay up until you feel like going to bed.
    c. You eat nothing but peanut butter.
2. DISCUSS. What would be the effects on others I live with?

Evaluation

Teacher Comments

Recommended Changes

NORTHSIDE SCHOOL
Levittown, New York

EACHER'S CAREER AWARENESS WORK SHEET - Objective and Related ctivities

EVEL 4 CONCEPT #2 OBJECTIVE #2-b

areer Awareness Objective: Children will recognize what is required for human beings to get along with each other.

uggested Activities

ESOURCE PEOPLE

. Take a walking tour to see what is happening near school i.e. watch a house being built. Observe how workmen get along to accomplish a job. Write experience story to recall events, directions, and how people get along with each other on the street, in the store, etc.

. DISCUSSION: Children will compare their trip findings regarding what people do to get along with each other.

Evaluation

Teacher Comments

Recommended Changes

TEACHER'S CAREER AWARENESS WORK SHEET- Objective and Related Activities

LEVEL 5 CONCEPT #2 OBJECTIVE # 2-b

Career Awareness Objective: Children will recognize what is required for human beings to get along with each other.

Suggested activities	Evaluation
	Teacher Comments
Science:	
1. TIME LINE: Construct a time line illustrating the development of communication and how communication has helped people get along with each other.	
LANGUAGE ARTS:	
2. RESEARCH: The various occupations dealing with the agencies that help the poor, the prisoner, the sick to find out what is done to help these groups get along with each other. DISCUSS, REPORT.	
	Recommended Changes

NORTHSIDE SCHOOL
Levittown, New York

TEACHER'S CAREER AWARENESS WORK SHEET - Objective and Related Activities

LEVEL 6
CONCEPT #2
OBJECTIVE #2-b

Career Awareness Objective: Children will recognize what is required for human beings to get along with each other.

Suggested Activities

Social Studies:

1. Discuss. There have been small wars in many countries during the past 20 years. With the aid of an encyclopedia or other resource, name some of the countries and locate them on a map.. Discuss what has been done and what is need to rebuild a war torn country. What action has been taken to help these people get along with each other?

   Develop a written report for each country identified.

Evaluation
Teacher Comments

Recommended Changes

NORTHSIDE SCHOOL
Levittown, New York

TEACHER'S CAREER AWARENESS WORK SHEET - Objective and Related Activities

LEVEL 3 CONCEPT #2 OBJECTIVE # 2-c

Career Awareness Objective: Children will recognize that school is a career that requires proficiency in specific areas.

Suggested Activities	Evaluation
LANGUAGE ARTS	Teacher Comments
1. Children discuss skills they are learning; reading, writing, spelling. List on the board. Discuss which skills might you need in a job. Circle these.	
2. LANGUAGE ARTS TREES: Use artificial tree (christmas tree) branches suspended or drawn on poster board. Label each one for learning skill. Decorate each tree with names of workers at home, school, community who use these skills.	
	Recommended Changes

TEACHER'S CAREER AWARENESS WORK SHEET - Objective and Related Activities

LEVEL 4 CONCEPT # 2 OBJECTIVE # 2-c.

Career Awareness Objective: Children will recognize that school is a career that requires proficiency in specific areas.

Suggested activities	Evaluation
Language Arts: 1. SCRAPBOOK OF WORKERS: Construct a scrapbook of social scientist, listing duties, personal qualifications, skills needed, and identify school related skills. 2. Discuss through committee areas identified in scrapbook.	Teacher Comments Recommended Changes

NORTHSIDE SCHOOL
Levittown, New York

TEACHER'S CAREER AWARENESS WORK SHEET
Objective and Related Activities

LEVEL 5 CONCEPT # 2 OBJECTIVE # 2-c.

Career Awareness Objective: Children will recognize that school is a career that requires proficiency in specific areas.

Suggested activities

SOCIAL STUDIES:

1. CHART: A chart will be constructed to determine training needed to aquire skills for jobs.

   OCCUPATION/ SKILLS NEEDED/
   HOW SKILLS ARE ACQUIRED

   Circle in color skills acquired in school.

Evaluation

Teacher Comments

Recommended Changes

NORTHSIDE SCHOOL
Levittown, New York

TEACHERS CAREER AWARENESS WORK SHEET-Objective and related activities

LEVEL 6 CONCEPT # 2 OBJECTIVE # 2-d

Career Awareness Objective: Children will recognize that school is a career that requires proficiency in specific areas.

Suggested activities

RESOURCE PEOPLE

1. MINI-CAREER DAY. Invite as many resource people as possible to work with groups of children on avariety of different careers. For example; minister, athlete, T.V. repair man, architect, librarian, waitress, nurse, etc. Encourage these people to plan to show the effects of their school life on the proficiency in their specific areas.

Evaluation

Teacher comments

Recommended Changes

NORTHSIDE SCHOOL
Levittown, New York

TEACHER'S CAREER AWARENESS WORK SHEET - Objective and Related Activities

LEVEL 3 CoNCEPT # 2 OBJECTIVE # 2-d.

Career Awareness Objective: Children will perceive educational skills as determinants of future life.

Suggested activities

SCIENCE:

1. Make a weather chart and discuss how weather affects the environment. Talk about the work of the weatherman. Let children enact as the weatherman and report on week's weather. Show how each one could be a future weatherman.
2. Follow same procedure in other areas.

Evaluation

Teacher Comments

Recommended Changes

NORTHSIDE SCHOOL
Levittown, New York

TEACHER'S CAREER AWARENESS WORK SHEET- Objective and Related Activities

LEVEL 4 CONCEPT 2 OBJECTIVE 2-d.

Career Awareness Objective: Children will perceive educational skills as determinants of future life.

Suggested activities

SOCIAL STUDIES

1. Center-for services the child can perform for himself as compared to services he must have someone perform for him.

   Explanation of Center.

   1. have a toothache
   2. lost a house key
   3. bicycle tire blow out
   4. have a bad cold
   5. shoe has hole
   6. pen will not write

   problem to be solved

2. Child picks a problem out of the box. Decides if he/she can or cannot solve it himself/herself.
   If not, it goes into the "I cannot do it" box.
   Next, a plain sheet of paper is taken from the "Paper for Your Answers" box. On this paper, number to six and write the answers to the six problems on the paper, looking at the words on the front of the chart.
   Child puts his name on the paper and gives it to the teacher.

   Conclusion: child will be instructed that he/she was learning how to solve a problem, necessary skill for future life.

Evaluation
Teacher Comments

Recommended Changes

NORTHSIDE SCHOOL
Levittown, New York

TEACHER'S CAREER AWARENESS WORK SHEET- Objective and Related Activities.

LEVEL 5 CONCEPT #2 OBJECTIVE #2-d.

Career Awareness Objective: Children will perceive educational skills as determants of future life.

Suggested Activities	Evaluation
LANGUAGE ARTS	Teacher Comments
1. RESEARCH: From the local historical society, old newspaper, or library. Committee groups will find out about jobs that used to be needed in the community but are no longer needed. Jobs that presently exist and will exist in the near future. How these jobs relate to present educational skills such as communication, problem-solving and decision making.	
Reports will be given in writing or orally by a committee chairman.	
	Recommended Changes

NORTHSIDE SCHOOL
Levittown, New York

TEACHER'S CAREER AWARENESS WORK SHEET - Objective and Related Activities

LEVEL 6 CONCEPT #2 OBJECTIVE #2-d

Career Awareness Objective: Children will perceive educational skills as determinants of future life.

Suggested activities

Evaluation

LANGUAGE ARTS:

1. ROLE PLAYING: To experience the idea of future life, children could experience the jobs available in a restaurant by planning a luncheon. Some could be cooks while others are waitresses; some write the menu, while others collect the bill.

   Relationships will be drawn during a discussion period identifying educational skills necessary to carry out the job experienced, such as, math, spelling, science, speaking, listening.

Teacher Comments:

Recommended Changes

NORTHSIDE SCHOOL
Levittown, New York

TEACHER'S CAREER AWARENESS WORK SHEET-Objective and Related Activities.

LEVEL 3 CONCEPT # 2 OBJECTIVE # 2-e

Career Awareness Objective: Children will understand the relationship between learned skills and life roles.

Suggested activities | Evaluation

LANGUAGE ARTS

1. ROLE PLAY- Contrast the two city life and suburban life in a role play of jobs done in both places. Point out areas of learned skills in both life roles.

2. WORKSHOP * Assemble materials for peep boxes; shoe boxes, crayons, paper, magazine cut out of urban and suburban job situations.

   Have two or three children work on each peep box or class make two as a class project.

Teachers Comments

Recommended Changes

NORTHSIDE SCHOOL
Levittown, New York

TEACHER'S CAREER AWARENESS WORK SHEET- Objective and Related Activities

LEVEL 4 CONCEPT # 2 OBJECTIVE # 2-e

Career Awareness Objective: Children will understand the relationship between learned skills and life roles.

Suggested activities	Evaluation
LANGUAGE ARTS	Teacher Comments
1. RESEARCH-What jobs did the people who settled in America do in the country from which they came? How many still exist? How have other jobs evolved from these? Center or Comparison Chart will be developed to record how the learned skills relate to life roles of these people.	
	Recommended Changes

NORTHSIDE SCHOOL
Levittown, New York

TEACHER'S CAREER AWARENESS WORK SHEET
Objective and Related Activities

LEVEL 5 CONCEPT #2 OBJECTIVE # 2-e

Career Awareness Objective: Children will understand the relationship between learned skills and life roles.

Suggested activities	Evaluation
RESOURCE PEOPLE 1. MINI-CAREER DAY for your class by inviting as many resource persons as possible to work with groups of children. For example; pilot, policeman, mailman, artist, etc. to discuss how their learned skills affect their life roles.	Teacher Comments Recommended Changes

NORTHSIDE SCHOOL
Levittown, New York

TEACHER'S CAREER AWARENESS WORK SHEET-Objective and Related Activities

LEVEL 3 CONCEPT #2 OBJECTIVE #2-e

Career Awareness Objective: Children will understand the relationship between learned skills and life roles.

Suggested Activities	Evaluation
LANGUAGE ARTS 1. BOOKLET: Develop an illustrated booklet, as a combined class project, of all the people and businesses which affect the way we live. Pictures, stories, poems and songs about people who provide our basic needs and wants can be included. Plan to add to this booklet using related themes on life roles.	Teacher Comments Recommended Changes

TEACHER'S CAREER AWARENESS WORK SHEET- Objective and Related Activities

LEVEL 3 CONCEPT # 2 Objective # 2-f

Career Awareness Objective: Children will develop an appreciation of the wage earner's occupation and his importance to the family.

Suggested activities	Evaluation Teacher Comments
SOCIAL STUDIES SIMULATION- 1. Set up a community in the classroom using the store corner. Have a bank corner, stressing the attitude toward saving and making change. The decision to buy, the children will learn, is based on wants and needs. After children are selected as store owners or workers the ones left over are family members, who will be the decision-makers as to what is to be bought and who will go where (from how much salary the family earned) Following the experience, the importance of the wage earner to the family will be discussed.	
	Recommended Changes

NORTHSIDE SCHOOL
Levittown, New York

TEACHER'S CAREER AWARENESS WORK SHEET - Objective and Related Activities

LEVEL 4 CONCEPT #2 OBJECTIVE #2f

Career Awareness Objective: Children will develop an appreciation of the wage earner's occupation and his importance to the family.

Suggested Activities

SOCIAL STUDIES:

1. RESEARCH* Map Study- Using a map of Nassau County show the resources available in each area. Indicate the types of jobs that are needed in each area. What new jobs will be created when people begin to pay for resources with other communities? (Merchant-buyer and seller, salesman, transportation, etc.) What do we make and consume within our own community? What do we send out of the community? What do we get from other communities? What jobs are involved, and what salaries are earned? COMPARE RESULTS.

Evaluation

Teacher Comments

Recommended Changes

NORTHSIDE SCHOOL
Levittown, New York

TEACHER's CAREER AWARENESS WORK SHEET - Objective and Related Activities

LEVEL 5 CONCEPT # 2 OBJECTIVE #2-f

Career Awareness Objective: Children will develop an appreciation of the wage earner's occupation and his importance to the family.

Suggested activities	Evaluation
SOCIAL STUDIES 1. DISCUSSION: Present the various ways in which society rewards people for work. List on board. 2. INVENTORY: Also list various people children know who do different types of work. Direct the children to ask these people "Why" they work and complete the inventory chart with reasons. The results can be brought to class when completed in categories according to reasons. Example; profit, personal satisfaction, responsibility to others.	Teacher Comments Recommended Changes

NORTHSIDE SCHOOL
Levittown, New York

TEACHER'S CAREER AWARENESS WORK SHEET - Objective and Related Activities

LEVEL 5 CONCEPT # 2 OBJECTIVE # 2-f

Career Awareness Objective: Children will develop an appreciation of the wage earner's occupation and his importance to the family.

Suggested activities

LANGUAGE ARTS

1. Interview someone you know who holds two jobs to determine the reasons for such action.

2. Survey parents of the school to see how many hold two or more jobs. Find out why do people have to work at more than one job and why would they want more than one job.

3. Present a situation to children involving a three-day work week. What would they do with the extra time? Would they get another job or use the leisure time for recreation. This might lead to the conclusion that occupations are important to an individual and to a family

Evaluation

Teacher Comments

Recommended Changes

NORTHSIDE SCHOOL
Levittown, New York

TEACHER'S CAREER AWARENESS WORK SHEET - Objective and Related Activities

LEVEL 3 CONCEPT # 3 OBJECTIVE #3-a

Career Awareness Objective: Children will be able to match necessary skills with career areas.

Suggested activities	Evaluation
LANGUAGE ARTS:	Teacher Comments
1. Write a short story on your present skills and relate it to a career that you are interested in. example; I Can Take Care of Our Garden Career- Landscape Artist	
2. RESEARCH - work opportunities for persons which require various physical characteristics. (Want-Ads can be used.) Find out whether you have the skills necessary.	
3. Books- Select simple biographies of famous people. Discuss if early skills became part of their later work or career.	
	Recommended Changes

NORTHSIDE SCHOOL
Levittown, New York

TEACHER'S CAREER AWARENESS WORK SHEET - Objective and Related Activities

LEVEL 4 CONCEPT # 3 OBJECTIVE # 3-a

Career Awareness Objective: Children will be able to match necessary skills with career areas.

Suggested activities | Evaluation

LANGUAGE ARTS

1. ROLE PLAY jobs of community workers and family workers. Pantomines will be used. Try to guess the skill for this job.
2. GAME Give each child an envelope containing letters which spell out the title of a community worker. (salesman) Have the children unscramble the letters to identify the career area and write a poem about the career relating to what skill he has, where he works, and how he helps others.
3. Music- From music books find songs involving workers substitute the name of the skill used wherever the work appears.

Teacher Comments

Recommended Changes

NORTHSIDE SCHOOL
Levittown, New York

TEACHER'S CAREER AWARENESS WORK SHEET — Objective and Related Activities

LEVEL 5 CONCEPT #3 OBJECTIVE # 3-a

Career Awareness Objective: Children will be able to match necessary skills with career areas.

Suggested Activities	Evaluation Teacher Comments

SOCIAL STUDIES

1. CHART: Construct a chart with each student's name listed. Children will indicate skill not yet achieved but desired because of a current decision in a specific career area.

   Example:

   Name / Skill Needed / Desired Career

2. Discussion- Reasons for desired skill, for desired career.

Recommended Changes

NORTHSIDE SCHOOL
Levittown, New York

TEACHER'S CAREER AWARENESS WORK SHEET - Objective and Related Activities.

LEVEL 6 CONCEPT #3 OBJECTIVE #3-a

Career Awareness Objective: Children will be able to match necessary skills with career areas.

Suggested Activities	Evaluation
ART	Teacher Comments
1. Bulletin Board - Collect pictures and construct a bulletin board showing new jobs that have opened for women. Identify skills needed.	
2. BRAINSTORMING SESSION - List jobs that children believe only men can perform; and, those that only women can perform. Discuss why they feel as they do.	
	Recommended Changes

NORTHSIDE SCHOOL
Levittown, New York

TEACHER'S CAREER AWARENESS WORK SHEET - Objective and Related Activities

LEVEL 3 CONCEPT #3 OBJECTIVE #3-b

Career Awareness Objective: Children will relate social and personal interaction skills to employ ability

Suggested activities

SOCIAL STUDIES

1. COMPARE- Magazine picture of men and women at work and socializing.

   Discuss- Ask the question "Are these people in a play group or work group? What makes the difference?"

2. COMPARE- Magazine picture of a man and a woman at work and socializing.

   Discuss- Ask the question "Is the man at work or at play? What makes the difference?" Is the woman at work or play?

3. Point out interaction skills such as speaking and listening skills to employ ability to follow directions, to be accepted by others.

Evaluation

Teacher Comments

Recommended Changes

NORTHSIDE SCHOOL
Levittown, New York

TEACHER'S CAREER AWARENESS WORK SHEET-Objective and Related Activities

LEVEL 4 CONCEPT #3 OBJECTIVE # 3-b

Career Awareness Objective: Children will relate social and personal interaction skills to employ ability.

Suggested activities

LANGUAGE ARTS

1. PLAY (Puppet, or role play) The first day of May was proclaimed Law Day in 1958. The play "Goldilocks Haled into Court" will be enacted. Emphasize the interaction skills used by each character.
2. Discuss- The importance of proper interaction skills for success in any situation.

Evaluation

Teacher Comments

Recommended Changes

NORTHSIDE SCHOOL
Levittown, New York

TEACHER'S CAREER AWARENESS WORK SHEET-Objective and Related Activities.

LEVEL 5 CONCEPT # 3 OBJECTIVE # 3-b

Career Awareness Objective: Children will relate social and personal interaction skills to employ ability.

Suggested activities

LANGUAGE ARTS

1. SIMULATION: Using a series of cards with descriptions interaction skills (speaks clearly, listens attentively, responds positively, does not speak clearly, half listens, answers negatively, answers with one word- yes or no) Have children divide them into two piles-those that apply to them and those that do not. Then take the pile of those that apply and divide them into two piles-strengths and limitations. Taking the limitations, divide them into three piles-those that cannot be changed, those that need to be changed, and those that children want to change. Discussion to follow will follow on the rationale of the last three limitations.

2. Develop an Interaction Skills Center from findings.

Evaluation

Teacher comments

Recommended Changes

NORTHSIDE SCHOOL
Levittown, New York

TEACHER'S CAREER AWARENESS WORK SHEET - Objective and Related Activities

LEVEL 6 CONCEPT # 3 Objective--# 3-b

Career Awareness Objective: Children will relate social and personal interaction skills to employ ability.

Suggested Activities

SOCIAL STUDIES

1. Have two panels (one to represent the defense and the other the plantiff) regarding whether effective interaction skills were employed to solve the following problems:

   a. You work at a tannery which is contributing considerable pollution to the river and a decline in recreation.

   b. You represent a group of concerned citizens who oppose the opening of a new race track.

   c. You are part of a large group of lumbermen who are cutting a large track of timber. As a result of the cutting, major floods are occuring and wild life is being destroyed.

   d. You are applying for a job in which the employer is of a different political party. He encourages you to vote for his party candidate because it would increase work at the factory.

After the above cases have been enacted by the panels (3 members on each panel) Direct the rest of the class to identify effective and ineffective interaction skills used in each case.

Evaluation

Teacher Comments

Recommended Changes

NORTHSIDE SCHOOL
Levittown, New York

TEACHER'S CAREER AWARENESS WORK SHEET- Objective and Related Activities

LEVEL 3 CONCEPT #3 OBJECTIVE # 3-c

Career Awareness Objective: Children will develop an awareness of the consequences of personal decisions.

Suggested activities

SOCIAL STUDIES

1. INVESTIGATE- If you moved to another country how would the types of jobs and opportunity to choose your job be affected?
2. DISCUSSION: How do people in your family make decisions about jobs, travel, and recreation?
3. Write a short story about a recent personal decision. What happened? How did you feel after the decision was made?

Evaluation

Teacher Comments

Recommended Changes

NORTHSIDE SCHOOL
Levittown, New York

TEACHER'S CAREER AWARENESS WORK SHEET - Objective and Related Activities

LEVEL 4 CONCEPT # 3 OBJECTIVE # 3-c

Career Awareness Objective: Children will develop an awareness of the consequences of personal decisions.

Suggested activities

LANGUAGE ARTS

1. CREATIVE WRITING: Write a short story about one of the following situations:

   a. The day everyone wanted to do the same thing.

   b. The day when all the money in the world disappeared.

   c. The day there was no more houses or apartments vacant.

   d. The day when all the food ran out.

SOCIAL STUDIES

1. BRAIN STORMING: Conduct a session in which the children would discuss personal decisions made during a space flight. Conclusion: Ask how they arrived at a decision. How they felt after a decision was made

Evaluation

Teacher Comments

Recommended Changes

NORTHSIDE SCHOOL
Levittown, New York

TEACHER'S CAREER AWARENESS WORK SHEET-Objective and Related Activities

LEVEL 5 CONCEPT #3 OBJECTIVE #3-c

Career Awareness Objective: Children will develop an awareness of the consequences of personal decisions.

Suggested activities

RESOURCE PEOPLE

1. Invite people involved in the fine arts of the community for the purpose of interviewing. Direct the children to formulate questions prior to the interview and have a panel of children conduct the questioning. Questions should be about what kinds of decisions must be made as an artist. Are decisions made always final? How are decisions formulated? These resource people could include: librarians, music directors, museum directors, artist, etc. The children should see the importance of the consequences of decisions made by the above.

Evaluation

Teacher Comments

Recommended Changes

NORTHSIDE SCHOOL
Levittown, New York

TEACHER'S CAREER AWARENESS WORK SHEET- Objective and Related Activities

LEVEL 6 CONCEPT #3 OBJECTIVE #3-c.

Career Awareness Objective: Children will develop an awareness of the consequences of personal decisions.

Suggested activities

Evaluation

Teacher Comments

ART

1. Children can keep a scrapbook of newspaper clippings about how pressure group decisions affect daily living and work. These groups could include local and national strikes, protest groups at war, civil rights, or groups that lobby or march to better conditions in society.
   Sketch cartoons about pressure group situations.

LANGUAGE ARTS

2. Children will investigate through newspapers and T.V., the move by organized migrant workers to better their working conditions and make a saleable market for their product. At this point it will be important to emphasize the decisions of consumer boycotts on items such as lettuce, grapes, meats, etc.

   Help children to recognize what factors helped to make a personal decision.

Recommended Changes

NORTHSIDE SCHOOL
Levittown, New York

TEACHER'S CAREER AWARENESS WORK SHEET-Objective and Related Activities

LEVEL 3 CONCEPT #4 OBJECTIVE #4-a

Career Awareness Objective: Children will acquire a realistic view of the working roles i.e., all careers have advantages and disadvantages.

Suggested Activities

SOCIAL STUDIES

1. CENTER: Construct a center to point out things in the environment needed for kinds of work. Words can be listed in column 1 and pictures of listed items can be used to correct matching items.

	Column 1	Column 2
1.	Farmer	restaurant
	Fisherman	forest
	Janitor	water
	Construction Worker	field
	Cook	gas station
	Lumber Jack	dam
	Service Station Att.	store
	Sales Clerk	building

Include in this center the advantages and disadvantages for each career selected.

Evaluation

Teacher Comments

Recommended Changes

NORTHSIDE SCHOOL
Levittown, New York

TEACHER'S CAREER AWARENESS WORK SHEET - Objective and Related Activities

LEVEL 4 CONCEPT #4 OBJECTIVE # 4-a

Career Awareness Objective: Children will acquire a realistic view of the working roles i.e., all careers have advantages and disadvantages.

Suggested Activities

LANGUAGE ARTS

1. Select reading material on a particular job and prepare an activity sheet for the students. Suggestion: What Job For Me series, Webster Division, McGraw-Hill Book Co., St. Louis, Mo. Activity sheet should include:

   Description of Career selected- Information on the advantages (salary, vacation days, amount of preparation) Information on the disadvantages (location, schedule working hours, possible advancement, working conditions.)

2. Discuss occupations that might evolve because of increased population, and growing shortage of food. (i.e., health service, social services)
   Identify advantages and disadvantages in theses services.

Evaluation

Teacher Comments

Recommended Changes

NORTHSIDE SCHOOL
Levittown, New York

TEACHER'S CAREER AWARENESS WORK SHEET- Objective and Related Activities

LEVEL 5 CONCEPT # 4 Objective # 4-a.

Career Awareness Objective: Children will acquire a realistic view of the working roles i.e., all careers have advantages and disadvantages.

Suggested activities	Evaluation
LANGUAGE ARTS-SOCIAL STUDIES	Teacher Comments

LANGUAGE ARTS-SOCIAL STUDIES

1. Many occupations depend on trade with other nations. Research to find out what products and occupations depend on this international trade. If the children have difficulty in this study, suggest:

   What would happen if the U. S. refused to import foreign cars?
   What would happen if there was a ban on Japanese cameras, binoculars, etc.?
   If Venezuela stopped shipping oil to U. S.?
   How would a devaluation of the dollar effect the income of American workers overseas?
   What effects would a consumer boycott have on employment?
   If the President would declare a wage price freeze what impact would this have on the workers in this country?

Recommended Changes

NORTHSIDE SCHOOL
Levittown, New York

TEACHER'S CAREER AWARENESS WORK SHEET - Objective and Related Activities

LEVEL 6 CONCEPT # 4 OBJECTIVE #4-a

Career Awareness Objective: Children will acquire a realistic view of the working roles i.e, all careers have advantages and disadvantages

Suggested activities

SOCIAL STUDIES

1. PROBLEM SOLVING. You have inherited 1000 acres of land in Montana. Your present occupation is lawyer. This land contains:

   a. 200 acre lake
   b. 50 acres of forest land
   c. Remaining acreage is grassland.
   d. mineral report shows a deposit of copper located under the forested area.

On a large sheet of paper, make a map showing how you would develop the land to best use the natural resources and create new jobs.

Variation: In committees develop this on dimensional form using clay or paper mache.

Identify all of the advantages and disadvantages of this inheritance.

Evaluation

Teacher Comments

Recommended Changes

NORTHSIDE SCHOOL
Levittown, New York

TEACHER'S CAREER AWARENESS WORK SHEET - Objective and Related Activities

LEVEL 3 CONCEPT #4 OBJECTIVE #4-b.

Career Awareness Objective: Children will develop an appreciation for all work.

Suggested Activities	Evaluation
SOCIAL STUDIES	Teacher Comments
1. CHART: In one column list the various events taking place in a day and in the second column place the various events in the day of a child in a different area, land, or culture. From this, comparisons will be made.	
2. COMPARING: Children choose two different kinds of jobs and compare each in regards to the type of work and the living and working condition that would result.	
3. INVESTIGATION: Children could investigate seasonal jobs on Long Island.	
	Recommended Changes

NORTHSIDE SCHOOL
Levittown, New York

TEACHER'S CAREER AWARENESS WORK SHEET - Objective and Related Activities

LEVEL 4 CONCEPT # 4 OBJECTIVE # 4-b

Career Awareness Objective: Children will develop an appreciation for all work.

Suggested activities	Evaluation
LANGUAGE ARTS	Teacher Comments

LANGUAGE ARTS

1. Have children interview some person from another country or a person who has visited another country where job skills are primarily taught in the home by family members. (How do they perceive work?)

2. Have children make a survey to determine how family members perceive the world of work.

3. Role play the teaching of one of the following work skills:
    a. housekeeping
    b. care of the yard.
    c. do-it-yourself activity
    d. sewing and knitting
    e. working on the car

TEACHER evaluation of student appreciation or lack of appreciation for work.

Recommended Changes

NORTHSIDE SCHOOL
LEVITTOWN, NEW YORK

TEACHER'S CAREER AWARENESS WORK SHEET - Objective and Related Activities

LEVEL 5 CONCEPT # 4 OBJECTIVE # 4-b

Career Awareness Objective: Children will develop an appreciation for all work.

Suggested activities | Evaluation

SOCIAL STUDIES

1. Create a center. Listing skills with jobs. i.e., cooking, sawing, sewing, hammering, child care, building, cleaning up after a job, washing clothes, ironing, *Add to the list.

   Match with: Mom, Dad, Brother, Sister, etc.

   After completing this center encourage children to make their own slide or tape presenation or picture chart about the importance of all kinds of work.

Teacher Comments

Recommended Changes

NORTHSIDE SCHOOL
Levittown, New York

TEACHER'S CAREER AWARENESS WORK SHEET- Objective and Related Activities

LEVEL 6 CONCEPT # 4 OBJECTIVE # 4-b

Career Awareness Objective: Children will develop an appreciation for all work.

Suggested activities

LANGUAGE ARTS

1. Interview parents or neighbors to determine why they think their job is important. Also, ask if the person feels success in his/her work and why?

2. Brainstorming. Question and answer session on what constitutes successful work.

3. COMPARE two persons of the same occupation to determine why one has been a success and the other has failed.

Evaluation

Teacher Comments

Recommended Changes

NORTHSIDE SCHOOL
Levittown, New York

TEACHER'S CAREER AWARENESS WORK SHEET-Objective and related activities

LEVEL 3 CONCEPT #4 OBJECTIVE # 4-c

Career Awareness Objective: Children will recognize the interaction of careers and life styles.

Suggested activities	Evaluation
SOCIAL STUDIES	Teacher Comments
1. BULLETIN BOARD: Construct by dividing into two sections- Necessities and Luxuries- under each section pictures of careers and life styles can be placed.	
2. SIMULATION: Direct children to clip out as many advertisements from magazines as they can find. Ask them to separate them according to careers. A discussion will follow describing the various life styles they think the person in the picture lives.	
	Recommended Changes

NORTHSIDE SCHOOL
Levittown, New York

TEACHER'S CAREER AWARENESS WORK SHEET- Objective and Related Activities

LEVEL 4 CONCEPT # 4 OBJECTIVE # 4-c

Career Awareness Objective: Children will recognize the interaction of careers and life styles.

Suggested activities	Evaluation
MATH 1. Comparing: Children choose two jobs with different pay scales-one high and one low. They will work out a budget for each scale. From this they learn how salaries can effect one's way of life. 2. Investigation: Children clip out the grocery ads from the paper and bring into class. They will write up a shopping list of things they need for the week. They compare the prices of each store based on needed articles to determine what store it would be most economical to shop in for this week.	Teacher Comments Recommended Changes

NORTHSIDE SCHOOL
Levittown, New York

TEACHER'S CAREER AWARENESS WORK SHEET - Objective and Related Activities

LEVEL 5 CONCEPT #4 OBJECTIVE # 4-c

Career Awareness Objective: Children will recognize the interaction of careers and life styles.

Suggested activities

LANGUAGE ARTS

1. BOOKLET: A booklet can be prepared to illustrate all the people and businesses which affect the way we live. Pictures, stories, poems, and songs about people who provide basic needs and wants describing their way of life can be included.

ART

2. A mural in the form of a college can be constructed to show how the community uses tax money deducted. How the way of life in areas with more tax dollars appears better than in areas with less tax dollars by way of Parks, playgrounds, policemen, firemen, etc.

Evaluation

Teacher Comments

Recommended Changes

NORTHSIDE SCHOOL
Levittown, New York

TEACHER'S CAREER AWARENESS WORK SHEET-Objective and Related Activities

LEVEL 6 CONCEPT #4 OBJECTIVE #4-c

Career Awareness Objective: Children will recognize the interaction of careers and life styles.

Suggested Activities	Evaluation
LANGUAGE ARTS	Teacher Comments

1. SURVEY. local industry to determine
    a. Where the workers live
    b. types of housing
    c. where workers shop
    d. what kind of recreation do they engage in.

Develop a photoboard indentifying careers to be used during discussion on life styles.

Recommended Changes

NORTHSIDE SCHOOL
Levittown, New York

TEACHER'S CAREER AWARENESS WORK SHEET-Objective and Related Activities.

LEVEL 3 CONCEPT # 5 OBJECTIVE # 5-a

Career Awareness Objective: Children will understand that specialization creates an interdependent society and should benefit society.

[illegible]

Suggested activities

SOCIAL STUDIES

1. LISTENING STATION. Privide the resource materials on the development of a particular category of tools. (Ex. hunting tools). On the subject the student will record pertinent information on tape. This activity could be adapted in any way identifying specialization in the world of Careers. Also, provide film-strip or pre-recorded records on the subject so that all available information can be compiled by the student before taping.

2. Make a center matching tools with occupations. Show the interdependence these tools can play in the world of work.

Example:
Butcher-Knife
Carpenter-Knife
Mechanic-Knife
Barber-Knife
Farmer-Knife

Evaluation

Teacher Comments

Recommended Changes

NORTHSIDE SCHOOL
Levittown, New York

TEACHER'S CAREER AWARENESS WORK SHEET - Objective and Related Activities

LEVEL 4 CONCEPT # 5 Objective # 5-a

Career Awareness Objective: Children will understand that specialization creates an interdependent society and should benefit society.

Suggested activities

ART

1. Draw picture of future occupations to depict how the concept is related to past and present occupations.
    a. underwater farmer
    b. space shuttle driver
    c. fish rancher
    d. custodian in a sky lab.

Children should understand that a specialization can be used in a variety of ways.

Evaluation

Teacher Comments

Recommended Changes

NORTHSIDE SCHOOL
Levittown, New York

TEACHER'S CAREER AWARENESS WORK SHEET - Objective and Related Activities

LEVEL 5 CONCEPT # 5 OBJECTIVE #5-a

Career Awareness Objective: Children will understand that specialization creates an interdependent society and should benefit society.

Suggested activities

MATH

1. Organize through cooperative planning with the students, a miniature economic system in the classroom. The possible activities for this project are limited only by the imagination and productivity of the teacher. It should be emphasized that this activity should show how interdependence will benefit all, and that participation is to be primarily on the part of the student with only a limited amount of teacher guidance.
   State a few ideas that could be used to make your miniature economic system a success.

a. Give each student a basic pay of $5.00 to invest, spend, etc.
b. Set up situations where students can earn extra money by performing school duties.(Could be used as behavior modification project)
c. Have the children set-up 2 or 3 banks within the classroom offering different services to attract customers.
d. Have students make products to sell.
e. Create centers to teach concepts of banking, profit, lending investing, and budgeting.
f. Develop credit service.
g. Develop checking account
h. Have children do independent study of famous banking giants.

Outcome-Interdependence should be experienced.

Evaluation

Teacher Comments

Recommended Changes

NORTHSIDE SCHOOL
Levittown, New York

TEACHER'S CAREER AWARENESS WORK SHEET - Objective and Related Activities

LEVEL 6 CONCEPT #5 OBJECTIVE # 5-a

Career Awareness Objective: Children will understand that specialization create an interdependent society and should benefit society.

Suggested activities	Evaluation
SOCIAL STUDIES:	Teacher Comments
1. RESEARCH: Areas in the world that supply oil to various non oil producing countries.. Also, research areas in the world that supply basic food products to non food-producing countries. Find out how this creates interdependence in the economy of both areas. Divide the class into groups for research, analyzing and reporting. Dissiminate findings on pamphlet by charts, scales and drawings.	
	Recommended Changes

NORTHSIDE SCHOOL
Levittown, New York

TEACHER'S CAREER AWARENESS WORK SHEET - Objective and Related Activities

LEVEL 3
CONCEPT # 5
OBJECTIVE # 5-b

Career Awareness Objective: Children will appreciate the dignity of work.

Suggested activity	Evaluation
Social Studies	Teacher Comments
1. TIME LINE: A time line can be constructed illustrating all the methods of transportation that have been used since earlier days for the purpose of delivering products of exchange. Stress how this type of work holds a place of dignity in the world of work and survival.	
2. RESEARCH: Children can be divided into groups and then be given an area which they will represent. They can then find out all service occupations and decide how the service renders dignity to themselves and to others.	
	Recommended Changes

NORTHSIDE SCHOOL
Levittown, New York

TEACHER'S CAREER AWARENESS WORK SHEET-Objective and Related Activities

LEVEL 4 CONCEPT #5 OBJECTIVE #5-b

Career Awareness Objective: Children will appreciate the dignity of work.

Suggested activities	Evaluation
LANGUAGE ARTS	Teacher Comments
1. LETTER WRITING: Write letters to new industries, example, those involved in aerospace or oceanography, to find out future occupation in those fields.	
2. REQUEST, in letter composed by class, to State Representative his understanding of how work in New York State has demonstrated the dignity of the working man.	
	Recommended Changes

NORTHSIDE SCHOOL
Levittown, New York

TEACHER'S CAREER AWARENESS WORK SHEET- Objective and Related Activities

LEVEL 3 CONCEPT # 5 OBJECTIVE #5-b

Career Awareness Objective: Children will appreciate the dignity of work.

Suggested activities

SOCIAL STUDIES

1. SURVEY: Ask children to look around the area to see all the different kinds of buildings and then realize that a builder must know certain important skills in constructing a building. A Chart will be constructed of buildings in the area.

   Example:

   Kind of Building/Materials/Number of Floors
   Used

   Direct children to recognize that skilled workmen have a pride in what they do.

Evaluation

Teacher Comments

Recommended Changes

NORTHSIDE SCHOOL
Levittown, New York

TEACHER'S CAREER AWARENESS WORK SHEET - objective and Related Activities

LEVEL 6 CONCEPT # 5 OBJECTIVE # 5-b

Career Awareness Objective: Children will appreciate the dignity of work

Suggested activities

ART:

1. Design poster to advertise the dignity of jobs in different parts of the world. Example.

   a. Sponge diver in Greece
   b. Cigar maker in Havana
   c. Gaucho in Argentina
   d. Oysterman in the Chesapeake Bay
   e. Yamaha salesman in Osaka, Japan
   f. Gambler on the French Riviera
   g. Sailmaker in Bristol, England

   etc.

   Encourage class to extend this list. They should investigate how this occupation could best illustrate man's dignity at work.

Evaluation

Teacher Comments

Recommended Changes

NORTHSIDE SCHOOL
Levittown, New York

TEACHER'S CAREER AWARENESS WORK SHEET - Objective and Related Activities

LEVEL 3 CONCEPT # 6 OBJECTIVE #6-a

Career Awareness Objective: Children will recognize that people should adapt to technological changes.

Suggested activities

ART

1. CARTOONS: Direct children to draw cartoons based on the problems of too many people for one kind of job and too few people for another kind of job.

Language Arts

2. Compose a poem or phrases that will describe your cartoon.

   Encourage children to look for other problems in a technological society.

Evaluation

Teacher Comments

Recommended Changes

NORTHSIDE SCHOOL
Levittown, New York

TEACHER'S CAREER AWARENESS WORK SHEET- Objective and Related Activities

LEVEL 4 CONCEPT # 6 OBJECTIVE # 6-a

Career Awareness Objective: Children will recognize that people should adapt to technological changes.

Suggested Acitvities	Evaluation
LANGUAGE ARTS	Teacher Comments
1. Invite a recruiter from one of the armed services to discuss with the children the career aspect of military service, both during war and peace, emphasizing how the army adapts to technological changes.	
2. Encourage the children to write to the recruiter for pamphlets on army technology.	
	Recommended Changes

NORTHSIDE SCHOOL
Levittown, New York

TEACHER'S CAREER AWARENESS WORK SHEET - Objective and Related Activities

LEVEL 5 CONCEPT #6 OBJECTIVE #6-a

Career Awareness Objective: Children will recognize that people should adapt to technological changes.

Suggested activities	Evaluation
	Teacher Comments

SOCIAL STUDIES

1. Listing: Children will list the consequences when there are too many technical changes in a specific area. Remedies for this problem should be proposed.

   Example:
   Travel- new type of car
   Communication- new type of phone
   Food production- new type of dried foods.

2. Map: Divide and outline map of the U.S. into various geographic areas that have sudden changes vs. areas that do not have sudden changes. A discussion on each group's conclusions should follow.

ie - large corporations will develop completely - undeveloped areas such as desert to provide factories, homes, stores for skilled workers.
ex - urban area 20 miles away from Albuquerque, New Mexico
ex - Oil companies develop huge complexes of modern living in Arab oil fields
- Exxon

Recommended Changes

NORTHSIDE SCHOOL
Levittown, New York

TEACHER'S CAREER AWARENESS WORK SHEET - Objective and Activities

LEVEL 6 CONCEPT # 6 OBJECTIVE # 6-a

Career Awareness Objective: Children will recognize that people should adapt to technological changes.

Suggested activities

Evaluation

SOCIAL STUDIES

1. SAMPLE PROJECT: Children can pretend that they have discovered a new land which has all the necessary resources for existence. Their problem will be to organize themselves so that they can compete with highly developed technical countries.

   Procedures from planning might be:

   1. Sketch a map of resources and land features and give the land a name.
   2. Decide on what businesses they will establish first, second, third.
   3. Develop a system of training for jobs.
   4. Develop a system of exchange.
   5. Another map of the proposed development will be sketched so that ideal placement can be decided on. Collages of possible area views could be made.

Teacher Comments

Recommended Changes

NORTHSIDE SCHOOL
Levittown, New York

TEACHER'S CAREER AWARENESS WORK SHEET - Objective and Related Activities

LEVEL 3 CONCEPT # 6 OBJECTIVE # 6-b

Career Awareness Objective: Children will recognize that social change creates or eliminates work.

Suggested activities

LANGUAGE ARTS.

1. Provide pictures of Long Island 20 or 50 years ago. Ask if they recognize any changes in the way people work, communicate, travel then and now.

   WRITE: A poem using your imagination on what Long Island will look like 50 years from now.

2. List: changes that may have taken place in your home over the past five years. Request the help of your family. Write a brief report on the changes.

Evaluation

Teacher Comments

Recommended Changes

NORTHSIDE SCHOOL
Levittown New York

TEACHER S CAREER AWARENESS WORK SHEET - Objective and Related Activities

LEVEL 4 CONCEPT # 6 OBJECTIVE # 5-b

Career Awareness Objective: Children will recognize that social change creates or eliminates work.

Suggested activities

SOCIAL STUDIES:

1. Organize a "World of Work" fair for parents.

The fair should demonstrate:

Social changes in: dress
occupation
leisure
over the past 50 years.

Artifacts and antiques may be used.
Hand-made reproductions in
dress
tools
toys
should be sold at the fair.

Remember a fair exhibit consists of:

games
demonstrations
sellable items.

Good luck!

Teacher should be the guide in this project.

Evaluation

Teacher Comments

Recommended Changes

NORTHSIDE SCHOOL
Levittown, New York

TEACHER'S CAREER AWARENESS WORK SHEET-Objective and Related Activities

LEVEL 5 CONCEPT #6 OBJECTIVE #6-b

Career Awareness Objective: Children will recognize that social change creates or eliminates work.

Suggested Activities	Evaluation
LANGUAGE ARTS	Teacher Comments
1. Write a letter to the Chamber of Commerce to find out if they have a record of businesses that went out of business because of changes that took place in Levittown.	
2. Direct the children to write on the theme on "How Moving from One Area Will Create a Change in Me." Include: How the people I will meet can change me. How my parents' new job can change me. State what changes you recognize in the new area.	Recommended Changes

NORTHSIDE SCHOOL
Levittown, New York

TEACHER'S CAREER AWARENESS WORK SHEET- Objective and Related Activities

LEVEL 6 CONCEPT #6 OBJECTIVE #6-b.

Career Awareness Objective: Children will recognize that social change creates or eliminates work.

Suggested activities	Evaluation Teacher Comments
Language Arts	
1. INTERVIEW: An interview, with a child who plays the role of Thomas Jefferson, could be conducted whereby he would explain reasons why the writers of the Constitution planned for changes. EXPLORE THE CONSTITUTION: Alert the children to recognize that it provides for change. Ask: How the Founders knew this.	
	Recommended Changes

Appendix

The appendix consists of selected activities designed to achieve basic objectives of career education in grades 3, 4, 5 and 6. These lesson plans were drawn from Elementary Guide for Career Development, Education Service Center Region XIII, Austin, Texas, and should be used and adapted to meet the varying needs and interests of the teachers and their students.

GRADE 3

TOPIC I.

The kind of work a person chooses affects his whole life.

QUESTIONS

1. How many have moved? Why?
2. What can people do when the job a man has is no longer necessary?

ACTIVITIES

1. After determining how many have moved the teacher may find out how many moved because of their father's occupation. Discuss how work frequently determines where people live.

2. The children may dramatize the following situation with possible solutions:

   Mr. and Mrs. Black have three children. Mr. Black is an electrician. He puts electric wires in new houses. No more houses are being built in Greenwood. What can Mr. Black do?

3. The children may conduct a poll of neighborhood workers. They may ask the following questions:

   a. How many times have you moved in the last five years?
   b. Have you ever moved because of your job?
   c. How many times have you moved because of your work?

   The children will want to tabulate the results and reach some conclusions on the basis of their findings. A simple graph can be developed and put on poster board.

4. A committee of several children can be appointed to interview a moving van company to find out how many families they move every week and how far the families usually move. They will want to report their findings to the class. Some children may want to explore the work of the movers and report to the class or write their stories.

5. The children may read related books.

RESOURCE MATERIALS

a. Greene, Carla. I Want to be a Truck Driver. Children's Press, 1958.
b. Posell, Elsa Z. The True Book of Transportation. Children's Press, 1957.
c. Zoffo, George J. Big Book of Real Trucks. Grosset, 1950.

GRADE 3

TOPIC II

Self-understanding is important in making career decisions.

QUESTIONS

1. How are we all alike?
2. In what ways are we different?
3. What kind of person am I?

ACTIVITIES

1. The children may play a guessing game. One child may describe someone in the room and others may try to guess who it is. After several rounds in the game, the teacher may ask, "How did you know it was Suzie or Ben?" Through the responses of the children, the teacher may help them understand that everyone is alike in some ways and different in some ways, and it is important to know ourselves.

2. The teacher may use a check list inventory as a means of helping students begin understanding themselves.

   Examples of items to be used on the check list.

   I like to:

   ____ be outdoors
   ____ be indoors
   ____ draw pictures
   ____ talk to people
   ____ be by myself
   ____ help people
   ____ do things where I can move around
   ____ work with machines
   ____ work with my hands
   ____ try new things
   ____ make up songs
   ____ build things
   ____ collect things

3. The children may compare the results of their check list with others in their class to discover likenesses and differences. On the basis of their comparisons, they can write a paragraph on "What Kind of Person Am I?" The teacher will want to file these to aid later evaluation.

4. The children may read related books and view related filmstrips.

RESOURCE MATERIALS

a. What Could I Be? by Walter M. Lifton, Science Research Associates, pp. 28-29.
b. Lenski, Lois. When I Grow Up. Lippencott, 1960.
c. Maddox, Edith E. When I Grow Up. National Dairy Council, 1957.
d. "Living Together Series" filmstrips, Society for Visual Education.
e. "The Neighborhood Community Series" filmstrips, Ency.Britannica /Films.
f. "Our Homes Series" filmstrips, Eye-Gate House.

TOPIC III

Cooperation is essential in the world of work.

QUESTIONS

1. What is involved in cooperating with other people?
2. How is cooperation involved in the world of work?
3. Which jobs require cooperation?
4. Which jobs do not require cooperation?
5. How are speaking, reading, writing and listening helpful in cooperating with other people?

ACTIVITIES

1. The children may dramatize situations calling for cooperation at home and at school. Discuss what is involved in cooperating with other people. The teacher may ask the children to relate how cooperation is involved in the world of work.

2. The children may list occupations they know about under two headings:
   a. Jobs which require cooperation
   b. Jobs which do not require cooperation. The teacher may ask the children to explain why the occupations listed do or do not require cooperation.

3. The teacher may review the four main areas of language arts - speaking, reading, writing and listening. The children may divide into four groups, each taking one of the language arts areas, and show how this area is helpful in cooperating with other people.

4. The class may develop an experience chart showing the importance of all the phases of the language arts to the idea of cooperation.

5. The class may write and produce a puppet play around the idea of cooperation in home, school and work. The teacher will want to stress the importance of the give and take in cooperation during all stages of the development of the play.

6. Each child may choose an occupation that is related to language arts and investigate the importance of cooperation to that vocation. They may report their findings to the group orally or in written paragraphs if their writing skills are sufficiently developed.

7. The children may read related books, view related films and filmstrips to find cooperation among workers.

TOPIC III (Continued)

RESOURCE MATERIALS

a. The Teacher's Role in Career Development by W. W. Tennyson and others, National Vocational Guidance Association, pp. 69-71.
b. McCall, Edith S. The Buttons at the Farm., Benefic, 1961.
c. Ormsby, Virginia H. Twenty-One Children. Lippincott, 1957.
d. Agle, Nan, and Wilson, Ellen Three Boys and a Tugboat. Scribner, 1953.
e. Beim, Jerrold Country Garage. Morrow, 1952.
f. Curren, Polly. This Is a Town, Follett, 1957.
g. Schlein, Miriam. City Boy, Country Boy. Children's Press, 1955.
h. "The City Community," filmstrip, Ency. Britannica Films.
i. "Farm and City Series," filmstrips, Young America Filmstrips, McGraw-Hill.
j. "The Town Community Series," filmstrips, Ency. Britannica Films.
k. "Where People Live and Work," filmstrips, Visual Education Consultants, Inc.

GRADE 3

TOPIC IV

The ability to communicate effectively helps a person work well with other people.

QUESTIONS

1. What problems would you encounter if you could not talk?
2. What problems would you encounter if you could not write?
3. What problems would you encounter if you could not read?
4. What problems would you encounter if you could not listen well?
5. What would the world be like without language?

ACTIVITIES

1. The children may dramatize the following situations:
    a. A lady comes into a department store to buy shoes for her son. No one can talk during the transaction. What problems do they encounter?
    b. A car-hop takes orders for food from the people in several cars. The car-hop can't write. What problems will she have?
    c. A man needs a job so he looks in the want-ad section of the newspaper. He can't read. What problems will he have?
    d. A telephone operator doesn't know how to listen well. What problems will she have?

2. The teacher may ask the children to imagine what the world was like before people developed a language both spoken and written. The children may be able to understand the humorous situations which could have arisen. If desired, cartoons can be made showing people who have no language.

3. A bulletin board can be developed around the idea, "People Communicate in Their Work." Each child may place a picture of a worker on the bulletin board and tell how the ability to communicate effectively helps him in his work.

4. The class may visit a:

    a. Radio station
    or a
    b. newspaper plant

    to find out all the workers involved in production of a program or newspaper.

5. The children may read related books to find workers communicating effectively.

RESOURCE MATERIALS

a. Reichert, Edwin and Bracken, Dorothy K. Bucky's Friends, Lippincott, 1957.
b. Miner, Opal, and Servey, Irene. True Book of Communication, Children's Press, 1960.
c. Brewster, Benjamin. First Book of Firemen, Hale, 1954.
d. Bucheimer, Naomi. Let's Go to a Post Office, Putnam, 1957.
e. Cochrane, Joanna. Let's Go to the United Nations Headquarters, Putnam, 1958.
f. Rosenfield, Bernard. Let's Go to the Supreme Court, Putnam, 1960.
g. Rosenfield, Bernard. Let's Go to the F.B.I., Putnam, 1960.

TOPIC V

Many jobs are related to mathematics.

QUESTIONS

1. What would our world be like without numbers?
2. How does mathematics help people in their jobs?

ACTIVITIES

1. The teacher may ask the students to imagine what our world would be like without numbers. She may ask these questions:

   a. How could we tell how far it is to a neighboring city or town?
   b. How could we tell if it is dinner time?
   c. How would we know how old we are?

2. The children may conduct a survey of workers with whom they are familiar to discover how mathematics helps them in their work. The class may compile the results of their survey and arrive at some conclusions regarding the need for mathematics among workers. A bar graph can be developed as a class project. The teacher may point out that mathematics is used even in this activity.

3. The class may visit a banking institution to find out some of the occupations associated with the handling of money. The bank guide will want to stress the duties of each worker seen in the bank and how the bank helps workers in other occupations.

4. The teacher or children may make crossword puzzles concerning occupations related to the field of mathematics.

TOPIC V (Continued)

ACTIVITIES

5. The class may develop a bulletin board around the theme "Occupations Related to Mathematics."

6. The children may read related books to find some of the occupations related to mathematics.

RESOURCE MATERIALS

a. Elkin, Benjamin. The True Book of Money, Children's Press, 1960.
b. Rees, Elinor. At the Bank, Melmont, 1959.
c. Sootin, Laura. Let's Go to a Bank, Putnam, 1957.
d. Rosenfield, Benjamin. Let's Go to the U. S. Mint, Putnam, 1960.
e. Greene, Carla. I Want to Be a Restaurant Owner, Children's Press, 1960.
f. Miller, Jane. To Market We Go, Houghton, 1954.

GRADE 3

TOPIC VI

Occupations are groups in job families.

QUESTIONS

1. What is a family?
2. To what family do you belong?
3. How are families alike?
4. How are families different?

ACTIVITIES

1. The children may discuss the above mentioned questions. From this, the children may develop family trees showing the people in their own families and writing the occupation of each member of the family.

2. The teacher may explain to the children that jobs are grouped in families too. Through class discussion, the children may suggest various ways that jobs can be grouped. At this point, the teacher will want to avoid giving the children an accepted list of job families inasmuch as this may curtail later exploration of job classification systems by students.

3. The children may work in committees, each group taking one of the job families from the list they have developed and make a job family tree. The children will want to use reference books, library books and direct interviewing to develop their "trees."

4. The committees may develop job family posters and report, as a group, their findings to the entire class. The teacher may suggest there are many ways of grouping jobs, some of which they will later learn.

5. The children may read related books and view related films and filmstrips.

RESOURCE MATERIALS

a. What Could I Be? Walter M. Lifton, Science Research Assoc.pp12-15.
b. Lenski, Lois. We Live in the Country. Lippincott, 1960.
c. Carter, Katherine. The True Book of Houses. Children's Press,1957.
d. Hammond, Diana. Let's Go to a Harbor. Putnam, 1957.
e. Elting, Mary and Weaver, Robert. Soldiers, Sailors, Fliers and Marines. Doubleday, 1950.
f. Bemelmans, Ludwig. Madeline and the Gypsies. Viking, 1959.
g. Hefflefinger, Jane and Hoffman, Elaine. About School Helpers. Melmont, 1955.
h. "Letter to Grandmother" 19 min., Coronet.
i. "What Our Town Does for Us" 11 min., Coronet.
j. "My Dad Is a...Series" filmstrips, Long Film Slide Service.

GRADE 3

TOPIC VII

Supply and demand influence the kinds of occupations found in a community.

QUESTIONS

1. What does supply mean?
2. What does demand mean?
3. Why do some stores go out of business in our neighborhood?
4. Why do some stores do a good business in our neighborhood?

ACTIVITIES

1. The teacher may introduce the concept of supply and demand in the following manner:
    a. The teacher places a large amount of nails (or other undesirable item) and a small amount of pencils (or other desirable item) on a table. She may ask the children which they would rather have.
    b. The teacher then may alter the objects so that there is a large amount of pencils and a small amount of nails. She may again ask the children which they would rather have. The teacher may ask the children what they think the words "supply" and "demand" mean on the basis of what they have learned.

2. The children may dramatize the following situation.

    A man sets up a small factory to make wagon wheels. So many people come to buy wagon wheels that he hires many people to help him make wagon wheels. But gradually, people quit coming to buy wagon wheels. Instead they come in to buy parts for automobiles, but he does not have any. His workers made so many wagon wheels that they are stacked all around but nobody buys them. He tells the workers they will have to find other jobs and they leave. He goes to the front door to think about what has happened and he notices there are no more horse-drawn wagons on the street. There are no wagon wheels. Instead there are many automobiles.

    The children can discuss how supply and demand changed the business of the wagon wheel maker and what he could do about it.

TOPIC VII

ACTIVITIES (Continued)

3. Ask the children to look for empty store buildings in the community and try to find out:

    a. What kind of store was in the building?
    b. Why did it go out of business?

    The children may report their findings to the class and discuss how a community changes because of supply and demand.

4. The children may list occupations which they know that are directly dependent upon supply and demand. As they suggest vocations they may explain how supply and demand influence their jobs.

MATERIALS

A supply of pencils and nails.

GRADE 3

TOPIC VIII

There is a wide variety of jobs because of science.

QUESTIONS

1. What have inventions done to change the jobs people do?
2. How did these inventions change supply and demand?

ACTIVITIES

1. The teacher may review the concept of supply and demand and suggest to the children that scientists have altered and added to the kinds of jobs available to workers. The children may suggest inventions that people like and want which have created or changed occupations.

2. The teacher may read to the children the booklet, Space Jobs. The children may discuss the role that science has played in creating many occupations related to space exploration.

3. The class may develop a bulletin board around the theme : "Space Jobs." As each child places a picture of a worker associated with space exploration, he may tell the duties of the worker.

4. The class may be able to visit the Grumman Aerospace Corporation and see the many jobs people do to make space and travel related machines.

5. The class may look at the occupation cards from the Peabody Kit and identify science associated workers. They may write or tell stories about the worker's duties and training.

6. The class may look through science books to discover occupations associated with science.

RESOURCE MATERIALS

a. Peters, Jerman J., and others. SPACE JOBS. Superintendent of Documents, U.S.Government Printing, Washington.DC
b. Peabody Language Development Kit #2. American Guidance Serv.Co.
c. Greene, Carla. I Want to Be a Space Pilot. Children's Press,1961.
d. Chester, Michael. Let's Go to a Rocket Base. Putnam, 1961.
e. Butler, Roger. Let's Go to an Oil Refinery. Putnam, 1961
f. Greene, Carla. I Want to Be a Scientist, Children's Press, 1961.

TOPIC IX

A society needs both producers of services and producers of goods.

QUESTIONS

1. What kind of society would we have if all workers produced goods?
2. What kind of society would we have if all workers produced services?
3. What differences are there between goods and services?
4. Why must we have a balance?

ACTIVITIES

1. The teacher may review the concept of producers of goods and producers of services by holding up pictures of workers. The children can classify the workers with the teacher.

2. The class may develop two lists of community workers - those who produce services and those who produce goods. The teacher may cover one list and ask the children whether or not the community could do without the workers and why. She may do the same with the other list.

3. The children may create mobiles depicting the need for various workers in the community. A need for balance may be stressed.

4. The children may read related books to find producers of goods and producers of services.

RESOURCE MATERIALS

a. Israel, Marion Louise. Sheep on the Ranch. Melmont, 1958.
b. Trover, Dorothy, and Miller, Art. Growing Oranges. Melmont,1958.
c. Bate, Norman. Who Built the Bridge?. Scribner, 1954.
d. Hammond, Diana. Let's Go to a Harbor. Putnam, 1957.
e. McCarthy, Agnes. Let's Go to a Court. Putnam, 1961.
f. Chace, H. Haile. About the Captain of a Ship. Melmont, 1959.

GRADE 3

TOPIC X

Workers who produce services and workers who produce goods are interdependent.

QUESTIONS

1. How are people dependent upon one another?
2. What workers are we dependent on?

ACTIVITIES

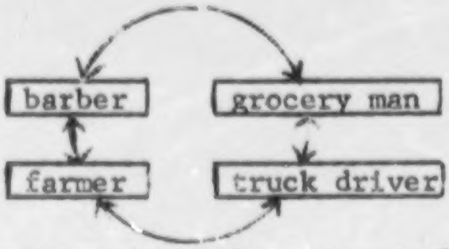
1. A review of the concept of society's need for both types of producers.

2. The children may dramatize the following situation:

   Mr. Williams is a butcher in a meat market. One morning as he gets ready to go to work he finds his car won't start. He calls a service station. Mr. White, a service station employee comes and fixes the car so that Mr. Williams can go to work as a butcher. Mr. White becomes hungry at noon and goes by the meat market to buy meat from Mr. Williams. Discuss how both men depend upon each other. From the discussion, generalize that workers are interdependent.

3. The children may work in small groups to develop a circular chart showing something of the interdependency of workers. Upon completion, groups may explain the charts to the class.

   EXAMPLE



4. The children may want to investigate unusual occupations and
   a. determine whether they are producers of goods or services
   b. show how they are needed by other workers and, in turn, are dependent on other workers.

RESOURCE MATERIALS

a. Green, Mary Moore. About Apples from Orchard to Market. Melmont, 1960.
b. Collier, Ethel. I Know a Farm. Scott, W.P. 1961.
c. Colonius, Lillian and Schroeder, G.W. At the Airport, Melmont, /1953.
d. Dictionary of Occupational Titles.

TOPIC XI

Occupations associated with fine arts give people enjoyment.

QUESTIONS

1. What does your family do in their nonworking hours?
2. How are these activities associated with music, drama and art?
3. What training do people in fine arts have?
4. What are the advantages of a job in fine arts?
5. What are the disadvantages?

ACTIVITIES

1. Elicit and list what children's families do in their nonworking hours. Let the children mark activities associated with music, drama and art. Children may suggest workers who provide music, drama and art enjoyment for families.

2. Each child may take one of the occupations mentioned and find out through reading or interviewing:

    a. the duties
    b. the training
    c. the advantages of the job
    d. the disadvantages of the job.

3. These findings can be written in paragraph form illustrated and compiled into a flip chart by the class entitled "Workers Who Give Us Enjoyment."

4. The children can work on murals depicting the fine arts and show some occupations associated with a given fine arts area.

5. The children may read related books.

RESOURCE MATERIALS

a. Borreson, Mary Jo. Let's Go to an Art Museum. Putnam, 1960.
b. Greene, Carla. I Want to Be a Ballet Dancer. Children's Press, 1959.
c. Slovita, Chana. Let's Go to a Ballet. Putnam, 1959.
d. Sootin, Laura. Let's Go to a Concert. Putnam, 1960.

TOPIC XII

Hobbies and interests sometimes lead to vocations.

QUESTIONS

1. What are hobbies?
2. What are interests?
3. What hobby or hobbies do you like?
4. What interest led you to this hobby?

ACTIVITIES

1. The children may have a hobby show. Each child may display and describe his hobby and tell what occupations this hobby might lead to. Encourage use of reference books from the school library before reporting occupations associated with a given hobby.

2. A person may be invited to speak to the class whose hobby as a child led to a vocational choice. The children should discover that hobbies are only one way of exploring interests which might have vocational implications.

3. To re-enforce the idea that hobbies are one way of discovering vocational interest, the children may conduct a survey of workers and report their findings to the class. The results may be tabulated, conclusions formulated and stated by the class. Sample questionnaire:

   a. What hobbies did you have as a child?______________________
   b. Did any of these hobbies help you
   decide what you wanted to do when you were grown?___Yes___No.
   If so, which one?__________________
   How did this hobby help you
   decide on a vocation?______________________

4. The children may read biographies of famous people such as George Washington Carver and Thomas Alva Edison to discover childhood interests and hobbies which may have lead to vocational decisions.

RESOURCE MATERIALS

a. Library - Biography section
b. Reference encyclopedias

TOPIC XIII

Training both in and out of school is usually required for a job.

QUESTIONS

How do people learn their job?

ACTIVITIES

1. The class may invite a high school principal or guidance counselor to explain the programs offered at high school level which can provide the training necessary for some occupations. He may suggest that other occupations need training beyond high school.

2. The children may interview workers in the community to discover the training either in school or on-the-job that they received. The teacher may suggest that each child interview a person with a different occupation so that the class will get a better understanding of the many levels of training necessary to various occupations. The class may develop from their survey lists of occupations grouped according to required training.

3. Each child may select an occupation in which he is currently interested and investigate the training requirements of that job, both general and specific.

RESOURCE MATERIALS

a. A person from the high school - guidance or principal.
b. persons chosen to be interviewed.

TOPIC XIV

There is dignity in work.

QUESTIONS

1. How do you feel while you're doing a job at home?
2. How do you feel when you finish doing a job at home?

ACTIVITIES

1. The teacher may ask the class to think back to the last time they were assigned a job to do at home in which they were interested. The children may discuss the above questions. The teacher may help the children understand that there is dignity in work by pointing out that the worker can take pride in a job well done.

TOPIC XIV

ACTIVITIES (Continued)

2. The children may dramatize various kinds of workers who do and do not take pride in their work. The teacher will want to encourage the portrayal of professional, skilled, semi-skilled, and unskilled jobs showing the dignity in all work as long as it is honest labor and meaningful to the worker.

3. Several workers from widely varying occupations may visit the class and explain why they enjoy their work. Careful screening and planning will need to be done by the teacher and the invited workers before the visit.

4. The children may read related books.

RESOURCE MATERIALS

a. Bate, Norman. Who Built the Highway. Scribner, 1953.
b. Barr, Jene. Dan the Weatherman. Whitman, 1958.

TOPIC XV

There are many jobs associated with health.

QUESTIONS

1. How many occupations do you think are associated with health?
2. What are some of these jobs?
3. What do people associated with health do?

ACTIVITIES

1. Discuss the known health occupations.

2. Use the "Dictionary of Occupational Titles" to find out other health related occupations.

3. Write to state or national health organizations such as the dental association for information regarding these fields.

4. Crossword puzzles may be developed and exchanged.

5. The children may write and produce a puppet play on health workers and how they help us.

6. Use related books.

TOPIC XV (continued)

RESOURCE MATERIALS

a. Dictionary of Occupational Titles.
b. Berger, Knute. A Visit to the Doctor, Grosset, 1960.
c. Chase, Francine. A Visit to the Hospital. Grosset, 1957.
d. Buchheimer, Naomi. Let's Go to a Dentist. Putnam, 1959.
e. Elting, Mary. First Book of Nurses. Watts, 1951.

TOPIC XVI

CULMINATION ACTIVITIES

1. Plan to exhibit the year's work, invite parents and other classes, act as guides to explain year's work to visitors.

2. Each child may write a report of the occupation studied which pleased him most. The reports should include:

   a. What are the duties of the occupation?
   b. Why is it interesting?
   c. Would you like to do this type of work and why?

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GRADE 4

TOPICS I and II

A. Finding areas of interest can aid self-understanding.

B. Self-understanding can point to vocational interests.

QUESTIONS

1. What do you like to do?
2. How can you find out about yourself?

ACTIVITIES

1. Administer interest inventory "What I Like to Do." Children can score their own profile sheet. Duplicate for later reference and evaluation.

2. Children can investigate interest areas by letter writing, reference materials and interviews to learn more about occupations under investigation.

3. Develop folders containing inventory profiles, lists of occupations associated with high interest areas and reports of some occupations investigated.

4. Discuss the fact that interest areas can change and as they grow they may find they have special abilities.

5. A personnel director for a company may be invited to discuss the place of interests and abilities in selecting a person for a job. He will want to point out that people may have many types of interests - some can find outlets in work - others in leisure time activities.

6. A variety of books will need to be provided for use in exploring vocations related to interests.

RESOURCE MATERIALS

a. Thorpe, Louis P. and others. "What I Like to Do" Science Research Associates, 1954.

b. Tennyson, W. Wesley and others. The Teacher's Role in Career Development. National Vocational Guidance Association, Washington, D. C., 1965.

c. Forrester, Gertrude. Occupational Literature. H.W.Wilson Co., New York, 1964.

d. Brockel, Ray. You and the Sciences of Plants, Animals, and the Earth. Children's Press, 1956.

e. Bendick, Jeanne and Robert. Television Works Like This. Whittlesey, 1954.

RESOURCE MATERIALS (Continued)

f. Bonner, Mary Graham. The Real Book About Journalism. Doubleday, 1957.
g. Cooke, David Cox. Behind the Scenes in Motion Pictures Dodd, 1960.
h. Bloch, Marie Halun. Tunnels. Coward, 1954.
i. Wells, Robert. What Does a Civil Engineer Do? Dodd, 1960.
j. Riedman, Sarah Regal. Let's Take a Trip to a Fishery. Abelard, 1956.
k. Botter, David. Politicians and What They Do. Watts, 1960.
l. Johnston, Johanna and Harris, Martin. What Does a Policeman Do? Dodd, 1959.

TOPICS III and IV

School helps a person prepare for the future.
Effective communication, partly learned at school, helps people cooperate and work well together.

QUESTIONS

1. In what ways does school help prepare a person for the future?
2. How can we get along well with other people?
3. How many job opportunities require training?
4. How many job opportunities require high school diplomas?
5. How many job opportunities require college degrees?

ACTIVITIES

1. Develop a chart of ways school helps prepare a person for the future. Note the place of language arts specifically.

2. Develop a list of characteristics required for the ability to get along well with others. Stress that language arts program helps provide skills necessary to communicate effectively.

3. Each child can investigate the part school plays in the training for one of the occupations he described as part of his major interest areas. Written reports can be shared with the class and included with their profile sheet in a folder.

4. The children can examine want ads from newspapers to determine the answers to questions 3-5 above.

5. Develop a bar graph showing educational requirements of jobs listed in newspapers. Use newspapers from different sources i.e. local, Long Island, New York City and other geographical areas. Compare results and make conclusions.

TOPICS III and IV

ACTIVITIES (Continued)

5. The children may read related books and view related films.

RESOURCE MATERIALS

a. Newspapers from various areas.
b. Flothe, Louise Lee. Triange X. Harper, 1960.
c. Buehr, Walter. The Genie and the Word. Putnam, 1959.
d. Graham, Clarence Reginald. First Book of Public Libraries. Watts, 1959.
e. "Communication in the Modern World," 11 min., Coronet.
f. "The Teacher" 13 min., Ency. Brittanica Films.

TOPIC V

Many jobs are related and can be grouped in job families.

QUESTIONS

1. What is a family?
2. What is a job?
3. What, then, is a job family?

ACTIVITIES

1. Discuss and define the above terms.

2. Introduce the job classification system developed by Anne Roe:

   a. Service
   b. Organization
   c. Business contact
   d. Technology
   e. Outdoor
   f. Science
   g. General culture
   h. Arts and entertainment

   Explain what is included and meant by each of the eight groups. Divide the class into eight groups and have them develop job families. The groups can use newspapers, the "Yellow Pages," library reference materials and interview workers as a basis for determining which occupations should be included. Booklets can be made for each classification. If this is too difficult, booklets using pictures may be made using headings such as selling, sports, entertainment, etc.

TOPIC V

RESOURCE MATERIALS (Continued)

a. Roe, Anne. *The Psychology of Occupations*. New York: John Wiley and Sons, 1956.
b. *Occupational Information: The Dynamics of Its Nature and Use*. Max F. Baer and Edward C. Roeber Science Research Associates, Inc. Chicago, 1964, pp. 167-173.
c. Tennyson, W. Wesley, and others. *The Teacher's Role in Career Development*. National Vocational Guidance Association, Washington, D. C. 1963, pp. 78-81.

TOPICS VI and VII

Advances in science change work.
Advances in science have altered the occupations that produce goods and occupations that produce services.

QUESTIONS

1. What changes have occurred in the United States due to technological advancement?
2. What subsequent changes were made in occupations within society?

ACTIVITIES

1. The teacher may show a film depicting some of the changes that have taken place in the United States. After viewing, discuss
    a. The changes due to technological advancement.
    b. The subsequent changes in occupations within the society.

2. Discuss the change from a predominently goods producing to service producing society - stress the role of the farmer then and now.

3. Each child may be assigned one of the filmstrips from the "Then and Now in the United States Series" to be previewed and reported on to the class. The children can be encouraged to stress the vocational change implications in their reports.

4. Develop a time line to show how various occupations of today emerged.

5. Visit a historical museum to see the changing patterns of occupations.

6. The children may read related books to find some of the changes that have taken place in occupations over the years.

TOPICS VI and VII (Continued)

RESOURCE MATERIALS

a. "Development of Transportation in the United States" 11 min., Ency. Britannica Films.
b. "Then and Now in the United States Series" filmstrips Ency. Britannica Films
c. Bannon, Laura May. Hawaiian Coffee Picker. Houghton, 1962.
d. Epstein, Samuel and Beryl W. First Book of Printing, Watts, 1955.
e. Rogers, Frances. Painted Rock to Printed Page. Lippincott, 1960.
f. Billings, Henry. Construction Ahead. Viking, 1961.
g. Benedict, Bart. Aluminum, The Story of an Industry. Lane, 1961.
h. Buehr, Walter. Bread, the Staff of Life. Morrow, 1959.
i. Colby, Carroll Burleigh. Plastic Magic: The Materials of a Million Uses. Coward, 1959.

TOPIC VIII

Where a person lives determines the kinds of occupations found there.

QUESTIONS

1. Why do you think geographical locations determine the kinds of jobs available?
2. What occupations are needed in every geographical area?

ACTIVITIES

1. Show a filmstrip "Where People Work and Live." Discuss.
    a. What occupations were shown?
    b. What geographical areas were shown?
    c. What effect does geographical location have on occupations?

2. The children may compare the want ad sections of newspapers from small towns and large cities to find the occupations that are the same and those that are different.

3. Each child may investigate whether or not an occupation in which he is interested would likely be found in any areas of the United States. He may write a paragraph showing his findings and add it to the booklet he started earlier in the year.

4. The class may correspond with children in other areas of the United States describing their communities and work and workers found there. Descriptive booklets of the communities could be written and illustrated with photographs and exchanged by the children.

TOPIC VIII

ACTIVITIES (Continued)

5. The children may read books depicting work in various parts of the country.

RESOURCE MATERIALS

a. 'Where People Live and Work" filmstrip Visual Educational Consultants, Inc.
b. Burt, Olive. Peter's Sugar Farm. Holt, 1954.
c. Spcar, Dahlov. Lobsterman. Knopf, 1962.
d. Lent, Henry. Submariner. MacMillan, 1962.
e. Hyde, Wayne. What Does a Parachutist Do? Dodd, 1960.
f. White, Anne Terry. All About Archaeology. Random, 1959.
g. Hyde, Wayne. What Does A Diver Do? Dodd, 1961.
h. Munzer, Martha. Unusual Careers. Knopf, 1962.
i. Pierce, Mary Lusk. The Community Where You Live. Allyn, 1959.

TOPICS IX and X

People work for various rewards.
Special training is required by most occupations associated with the fine arts.

QUESTIONS

1. Why do people work?
2. What is the difference between work and play?
3. What is the difference between work and a hobby?
4. When is work interesting and a pleasure?
5. What would life be like if your father never worked?

ACTIVITIES

1. Read a short biographical sketch to the class to stimulate interest in investigating answers to the question 'Why do people work?' Use Lives of Poor Boys Who Became Famous.

2. Discuss the above-mentioned questions.

3. Write to famous persons in the fine arts and find out how they became what they are, their training, their duties, etc.

4. Develop a bulletin board around the theme "Jobs in the Arts."

5. The children may read related books.

TOPIC IX and X (Continued)

RESOURCE MATERIALS

a. Bolton, S. D. Lives of Poor Boys Who Became Famous. Crowell Co.
b. Britten, Benjamin and Holst, Imogene. The Wonderful World of Music. Doubleday, 1958.
c. Bryan, Joseph. The World's Greatest Showman: The Life of P. T. Barnum. Random, 1956.
d. Streatfield, Noel. Skating Shoes. Random, 1951.
e. Haskell, Arnold Lionel. The Wonderful World of Dance. Doubleday, 1960.
f. Ryndham, Lee. Ballet Teacher. Messner, 1956.

TOPICS XI and XII

Supply and demand help determine available jobs.
Occupation influences the workers total life.

QUESTIONS

1. What is supply?
2. What is demand?
3. What might someone do if the super-market does not have a wanted item?
4. What would the store do if many people came in asking for that item?
5. How do supply and demand affect the super-market buyers?
6. How do supply and demand determine the kinds of jobs available to the worker?

ACTIVITIES

1. Review the concept of supply and demand by asking the children to think back to the times that they went to the supermarket with their mothers and found that the store did not have some item that their mothers wanted. Discuss above questions 3-6.

2. The children can dramatize the influence skate boards might have on the job market in the following hypothetical situation:

   Many children go to the store to buy skate boards. The store asks the factory to send many skate boards. The manufacturer hires many men to make skate boards. Gradually, children grow tired of playing with skate boards and stop buying them. The store does not order any more from the manufacturer. As a result the manufacturer stops making skate boards and tells his workers to find other jobs. The workers move to another city to find job

   The class can discuss how supply and demand determine the types o work available and occupations affect the workers life.

TOPICS XI and XII

ACTIVITIES (Continued)

3. Class can discuss and list the ways that occupations influence leisure time. If they have difficulty thinking of ways, the teacher may write a partial list on the board and ask the children to complete it by thinking of what these workers might like to do when they're not working. She may suggest to the children that frequently workers like to do something entirely different in their leisure hours.

JOB	Leisure Time Activities
Works inside	
Works outside	
Stands in his work	
Sits at a desk	
Works with his hands	
Works long hours	

4. The class may develop a bulletin board around the theme "When Workers Aren't Working" illustrating the kinds of leisure time activities of workers in various occupations.

RESOURCE MATERIALS

a. Pictures of workers and leisure time activities from magazines and newspapers.
b. Books on hobbies from the library.

GRADE 4

TOPICS XIII and XIV

There are many jobs because of specialization.
Specialization leads to interdependency.

QUESTIONS

1. What do we mean by specialization?
2. Why do health workers need to specialize?
3. How does specialization lead to interdependency?

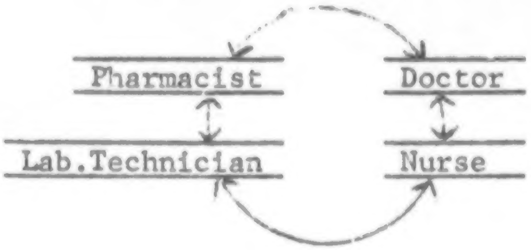
ACTIVITIES

1. List as many kinds of health occupations as you know and can find through reading references in the library. Discuss why there are so many occupations associated with health. Through leading questions, the children can discover that there is too much to know about health for any one person so different workers "specialize" in certain areas...teeth, eyes, bones, etc.

2. The children who have a high interest in health occupations may report to the class what they have learned about careers related to health.

3. A vocational rehabilitation counselor or laboratory technician may be invited to speak to the class about health occupations not usually within the children's experimental background.

4. The children can work in committees to develop circular graphs showing the interdependency of health occupations.
   Example:



5. The children may read books related to health and physical education occupations.

RESOURCE MATERIALS

a. Calder, Peter Ritchie. The Wonderful World of Medicine.
b. Daniel, Anita. Albert Schweitzer. Random, 1957.
c. Deming, Dorothy. Sky Nurse. Dodd, 1953.
d. Gelman, Steve. Baseball Bonus Kid. Doubleday, 1961.
e. Hume, Ruth Fox. Florence Nightingale. Random, 1960.
f. Rose, Mary Catherine. Clara Barton: Soldier of Mercy. Garrard,
g. Truax, Rhoda. True Adventures of Doctors. Little, 1954. /1960.

TOPIC XV

Work is important to the worker and to society.

QUESTIONS

1. Have you developed new interests during the year?
2. Do you have some of the same interests you had at the beginning of the year?

ACTIVITIES

1. The class may review the highlights of the year's work. By asking leading questions concerning what the class has learned about occupations, the teacher can help the students see that work is important - important to the worker and important to society.

2. The children may re-examine the booklets throughout the year and discuss the above questions.

3. The children may be asked to complete in twenty-five words or less the following statement: "My job today is going to school and getting my education. In ten years, I see myself doing...." The teacher will want to file these statements for later use in evaluating the vocational growth of each student.

4. The children may set up a display of the work they have done in career planning during the year and invite their parents or other classes to view it.

RESOURCE MATERIALS

a. Accumulated posters, reports, murals, etc.

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GRADE 5

TOPIC I

School is a part of the preparation for a career.

QUESTIONS (Teacher may use as motivation)

1. How can school help people prepare for work?
2. What should we expect to gain from school experiences?
3. What can we do to get the most out of school?

ACTIVITIES

1. Children can explore various occupations (by reading or interviewing) to discover:
   a. level of education needed
   b. facility in particular school subjects needed

2. Child may begin making career notebooks. To be kept and added to during the year.

RESOURCE MATERIALS

1. Occupational Charts, F.A., Owen Publishing Co., Dansville, N.Y.
2. Filmstrip - What Good Is School? Walter M. Lifton, Society for Visual Education, Inc., Chicago, Illinois
3. Books
   a. Colby, Carroll Burleigh, Police: The Work, Equipment, and Training of Our Finest, Coward, 1954.
   b. MacMann, Elaine, Risky Business, Putnam, 1956.
   c. Gibson, Michael Dara, Rescue From the Air, Abeland, 1960.

TOPIC II

In many careers cooperation among workers is essential.

QUESTIONS

1. Ask each child to name first thing that pops into his head when you say cooperation. Discuss with children likenesses and differences in their responses.

2. Discuss meaning of cooperation as it relates to:
   a. home
   b. school
   c. world of work

TOPIC II (Continued)
ACTIVITIES

1. Children may visit local establishment such as an auto-sales and service business to discover how clerks, salesmen, managers and mechanics need to cooperate in their work.

2. Children may write descriptive paragraphs relating to their observations during field trips and evidences of cooperation among workers. Add paragraphs to career notebooks.

3. Divide class into two groups:
    a. find careers in which cooperation is essential
    b. find careers in which cooperation is not essential

4. Groups can develop charts and pictures with captions showing cooperation as essential or non-essential.

RESOURCE MATERIALS

1. Tagboard, magic markers, pictures of workers
2. Peabody Language Development Kit Level #2
3. Books
    a. Benedict, Jeanne and Robert, Television Works Like This, W. Rittlesey, 1954.
    b. A Car is Born, prepared by Educational Affairs Dept., Ford Motor Co., Dearborn, Michigan (free)

TOPIC III

Career choice affects the individuals' total life - the selection(s) of friends, and the satisfaction of needs.

QUESTIONS

1. What are important needs that can be met by a career?
2. How may we fill the needs we've listed? (developed and listed by class)

ACTIVITIES

1. List on board:
    a. need for shelter
    b. need for food
    c. need for drink
    d. need for health
    e. need for friendship

EXAMPLE:

How does a job provide shelter for the workers and his family?

TOPIC III

ACTIVITIES (Continued)

2. Class may develop bulletin board around theme:

"Careers Meet Needs"

Need	Need	Need
☐	☐	☐
for Shelter	for Food	for Clothing

RESOURCE MATERIALS

1. Lenski, Lois, Corn-Farm Boy, Lippincott, 1954.
2. Milne, Ruth E., T.V. Girl Friday, Little, 1957.

TOPIC IV

Individuals differ in their abilities, interests, attitudes, and values.

QUESTIONS

Discuss:

1. In which areas is it helpful to be different from others?
2. In which areas would it be good if everyone were alike?
3. Do others see you as you see yourself?
4. Tell various members of the class about things you value most. (Children to and about children)

ACTIVITIES

1. Conduct survey of parents' and their friends' occupations.
   Sample survey:
   a. Parents' occupation________________________
   b. Friends' occupation________________________
   c. Are your parents' and their friends' occupations similar? __Yes __No.

2. Place in career notebook:
   a. list of the things you feel best describe you.
   b. divide list into those things which cannot be changed and those which can.
   c. separate the list of things which can be changed into
      A. strengths and
      B. those things which are not as strong as you would like them to be.
   d. Make a plan covering things you can do to make yourself more like what you would like to be.

TOPIC IV
ACTIVITIES (Continued)

3. Each child write a descriptive paragraph of some member of the class leaving out his name. (Teacher should encourage positive). Children may read their paragraphs and let class guess the person.

RESOURCE MATERIALS

1. Filmstrip by Walter M. Lifton, Who Are You? Foundations for Occupational Planning, Society for Visual Ed.
2. Films:
   a. Communications in the Modern World. Coronet Instructional Films, Coronet Bldg., Chicago, Ill.
   b. A Newspaper Serves It's Community. Film Association of Calif., 10521 Santa Monica Blvd.,LosAngeles,Calif.
   c. Telephone Hour, Michigan Bell Tel. Co., 220 N. Capitol Ave., Lansing, Michigan
   d. The Story of Communication, Series of seven titles - Eye Gate House, Inc., 146-01 Archer Ave.,Jamaica, N.Y.

TOPIC V

Some workers produce goods; others produce services.

QUESTIONS

Teacher may ask class for their ideas about what are goods? - what are services? Explore and develop fully the differences.

ACTIVITIES

1. Each student may select a career and find out by reading and/or interviewing information to answer questions.
   EXAMPLE:
   a. Nature of work
      A. What does the worker actually do on the job?
      B. Does he produce goods or services?
      C. What tools does he use?
      D. What are the working conditions?
      E. Hours?
      F. Surroundings?
   b. Qualifications
      A. What special abilities are required?
      B. Age?
      C. Physical characteristics of the worker?
   c. Do you think you would like to do this type of work? Why or why not?

TOPIC V (Continued)

REVIEW

a. Why do we need producers of goods?
b. Why do we need producers of services?
c. How do producers of services and goods help our community and nation?
d. How many producers of services and goods can you think of?

RESOURCE MATERIALS

a. Foster, Joanna. Page 5, *Pictures and Print: A Book in the Making*. Harcourt, 1958.
b. Billings, Henry. *Construction Ahead*, Viking, 1951.
c. Coombs, Charles Ira. *High Timber: The Story of American Forestry*, World, 1960.

TOPIC VI

Specialization leads to interdependency.

ACTIVITIES

1. Research and prepare short oral reports of how various types of workers depend on each other and work together.
    a. Field of aeronautics
        Stewardess and Pilot, Navigator and air traffic controller.
    b. Medicine
        Doctor and nurse, social worker - X-ray technician
    c. School system
        secretary - teacher, custodian -   , etc.
2. Set up display corner.

TOPIC VII

Technological and sociological changes eliminate and create jobs.

DISCUSSION

1. How have scientific inventions changed the way we live?
2. How have scientific inventions created new occupations?
3. How have inventions eliminated or done away with some occupations?

GRADE 5

TOPIC VII (Continued)

FILMS

a. Jetliner Captain, Fass-Levy Films, Denver.
b. Transportation by Air, Young America Films, McGraw Hill.
c. The Community Airport, Sigma Educational Films, 11717 Ventura Blvd., P.O.Box 1235, Studio City, Calif. 91604
d. Your Future as a Commercial Airlines Stewardess, Guidance Associates.

BOOKS

a. Stoddard,Edward, First Book of Television, Watts, 1955.
b. Cooke, David Coxe, Behind the Scenes in Television, Dodd, 1958.
c. Encyclopedia of Careers and Vocational Guidance, Vol. 1 Planning Your Career, Doubleday & Comp., Inc., Garden City, New York
d. Jobs in the Performing Arts, Science Research Assn. Inc., 259 E. Erie St., Chicago, Illinois

TOPIC VIII

Observation of people at work helps improve knowledge about careers.

QUESTIONS

Teacher ask class to name all the ways they have used to learn about various careers. List on board:

a. reading
b. interviewing
c. visiting
d. viewing films
e. talking
f. dramatizing

Teacher may suggest that one important way to "get a feel" of an occupation is by careful observation of the worker actually working.

Actual observations need parental and school permission: to be carried out during and after school hours.

ACTIVITIES

Children should devise letter of introduction.

SAMPLE: My name is ____________. I am in the fifth grade. We are learning about careers in our science class. One important scientific way to learn is through careful observation. I would like to observe you at work for one hour and ask some questions which will help me understand your occupation better.

TOPIC VIII (Continued

Sample of observation standards which may be developed by class.

a. keep in mind purpose for observations
b. record accurately what you see
c. have something specific to look for
d. observe worker in total work surroundings.
e. stand or sit where good observation can be made
f. be interested and pay attention

Class can develop observation rating sheet to take with them.

SAMPLE OF OBSERVATION RATING SHEET

Date Observed__________________ Time observed____________________

a. Name of occupation____

	Yes	No	Undecided
b. Worker uses hands			
c. Worker uses eyes			
d. Worker works with people			
e. Worker works with ideas			
f. Worker works with things			
g. Worker works outside			
h. Worker works inside			
i. Is his work dangerous			
j. What kinds of equipment or tools does he use			

k. What is the worker's attitudetoward his job?
____good, ____bad, ____indifferent (doesn't care)
l. What physical demands are placed on the worker by his occupation?
    1. Lifts heavy things_____
    2. Lifts light things_____
    3. Lifts very little _____
    4. Walks a great deal_____
    5. Walks a little _____
    6. Sits most of time _____
m. Summary of observations

Put into student notebook.

TOPIC IX

Georgaphic location determines kinds of work found therein and

Individuals live in a particular geographical location due to the nature of their work.

TOPIC IX (Continued)

QUESTIONS

1. From what you've learned about the United States, where might this occupation be found? (Present word occupation cards to class)
2. Could this occupation be found in more than one area of the United States? Why or why not.
3. (name of child) or Who would like to pin the occupation card in an appropriate region on the map?

MATERIALS

1. Large blank outline map of the United States.

2. Word card strip with following occupational titles written on them.
   - A. New England States
     - a. Textile bag and sack sewer
     - b. Metal riveter
     - c. Fishing net puller
     - d. Quarrying dynamiter
   - B. Middle Atlantic States
     - a. Coal mining
     - b. Manufacturing Doll eye setter
     - c. Electric wares Picture tube installer
     - d. Iron and steel Mixer operator
     - e. Photographic equipment Color printer
     - f. Canning Can patcher
     - g. Shipbuilding Wood caulker
   - C. South Atlantic States
     - a. Tobacco leaf Conditioner
     - b. Cotton Hoe Sharpener
   - D. South Central States
     - a. Petroleum Roustabout
     - b. Cattle Raising-drover
     - c. Farming
     - d. Rice Planter
     - e. Sugar cane loader
   - E. North Central States
     - a. Auto tester
     - b. Meat packing Gut puller
     - c. Farming
     - d. Dairy Cow washer
     - e. Corn picker

TOPIC IX

MATERIALS (Continued)

- F. West Central States
  - a. Flour milling - mixer
  - b. Sheep raising - herder
  - c. Wheat grower
- G. Mountain States
  - a. Mining
  - b. Gold prospector
  - c. Silver blaster
  - d. Copper shuttle car operator
  - e. Smelting - furnace operator
  - f. Vegetable growing - truck farmer
- H. Pacific States
  - a. Fruit grower - apricot packer
  - b. Lumbering - lumberjack
  - c. Airplane manufacturing
  - d. Airplane designer

ACTIVITIES

1. Class may make two lists on board:
   - a. Occupations found in most regions
   - b. Occupations found in only particular regions
2. Class may be divided into eight committees - to explore occupations found in assigned region. Encourage to read books, view filmstrips, interview, and write letters to get information.
3. Committees may prepare displays, charts, collect pictures, and present to class.
4. Bar graphs of tabulated moves and jobs of families.

RELATED FILM STRIPS

Geography Series - Far Western States, Northwestern, Southwestern
Ency. Britannica Films, Inc.
1150 Wilmette Avenue, Wilmette, Illinois

Teacher Reference- Lifton, Walter M., Keys To Vocational Decisions, SRA.
Hoppock, Robert, Occupational Information, McGraw Hill.

TOPIC X

Information about careers is needed by all individuals.

ACTIVITY

Class may view filmstrip to find some of the things people need to know about jobs. At conclusion students and teacher may discuss:

a. characteristics of jobs
b. importance of jobs
c. why people need information about careers.

Film - Lifton, Walter M., What is a Job? Society for Visual Education, Inc.

Each student may interview three workers in widely varying occupations to discover importance of some type of occupational information to the worker. Results of questionnaires can be discussed in class. Students can arrive at conclusion that all people need some type of information about careers.

SAMPLE QUESTIONNAIRE

a. Name of occupation
b. How did you learn about your occupation?
c. Do you feel you know enough about your job before you went into it?
d. What advice can you give me as I try to learn about the world of work?

MATERIALS

1. Widening Occupational Roles Kit, SRA.
2. Picture Charts for Occupations, F. A. Owen Publishing Co.,
   Dansville, New York

TOPIC XI

Supply and Demand help determine occupational choice

QUESTION

Teacher may ask class:
What determines the number of job openings in a given occupation, for example, violin maker?

Through discussion, class may be led to see that two factors play a large part in the number of job openings:
a. demand (need for goods or services)
b. supply (number of people already employed in that field)

TOPIC XI (Continued)

RESOURCE MATERIALS

1. Moore, Dick, *Opportunities in Acting*, Vocational Guidance Manuals, Universal Publishing and Distributing Corp.
2. Job Family Series No. 12 and 14, *Jobs in Art, Jobs in Performing Art*, Science Research Association
3. *Career Opportunities in Music*, American Music Conference, 332 So. Michigan Ave., Chicago, Ill. 60604
4. *Dance Careers for Men and Women*, American Association for Health, Physical Education & Recreation, 1201 16th St., N.W., Washington D.C. 20036.
5. *Handbook of Facts*, Science Research Association.

TOPIC XII

Careers are grouped by job families -
Positions are related within job families.

ACTIVITY

Teacher may show filmstrip explaining what a job family is and some ways jobs can be grouped. At conclusion of film, class may discuss:

a. What a job family is.
b. Ways to group jobs into families.
c. Why it is important to learn about job families.

FILM: Lifton, Walter M., What Are Job Families, Society for Visual Education, Inc.

Each student may name several occupations in which he is interested and discuss with class how they are related.

RELATED FILMS -

1. *American Cowboy*, Ford Motor Co., 300 Schaefer Road Dearborn, Michigan
2. *Cattleman*, Ency. Britannica Films Inc., 1150 Wilmette Avenue, Wilmette, Illinois
3. *Building a Highway*, Ency. Britannica Films
4. *Building a House*, Ency. Britannica Films
5. *Fred Meets a Bank*, Coronet Instructional Films.

RELATED BOOKS

1. Jobs in Clerical Work, Science Research Association
2. Jobs in Building, Construction Trader, SRA
3. Jobs in Mechanical Work, SRA
4. Jobs in Professional Home Economics, SRA

TOPIC XIII

Careers are of a wide variety

ACTIVITIES

1. Teacher may show picture of people involved in some type of accident, preferably receiving some type of medical assistance. Class may discuss:
   a. What has happened?
   b. What kind of help do the people need?
   c. Who can help them?

2. Each child may select a health career in which he is somewhat interested and prepare a report by writing for information and by reading related books. Following information may be included:
   a. duties
   b. training
   c. working conditions
   d. advantages
   e. disadvantages
   f. opportunities

3. Children may play career charades to emphasize role of various health occupations and variety of jobs available.

   Teacher should explain to class that:
   a. health careers are on the increase
   b. more people live longer, and there are more people than ever before.
   c. More people are aware of importance of good health and there is a growing demand for health services.

   Therefore: THERE WILL BE more health jobs open than ever before.

HEALTH RESOURCE MATERIALS

1. Daniel, Anita, Story of Albert Schweitzer, Random, 1957.
2. Deming, Dorothy, Hilda Baker, School Nurse, Dodd, 1955.
3. Health Series, 1951, My Father is a Public Health Doctor,
   My Mother is a Public Health Nurse,
   McClintock Producers, 6 Heathcote Road,
   Scarsdale, New York

TOPIC XIV

Individuals are qualified to perform in many different occupations.

ACTIVITIES

1. Teacher may put a silhouette of a human figure on bulletin board with three captions: abilities, interests, and occupations.

   Class may develop hypothetical person, making up his interests, and abilities. Then class can make up list of occupations the individual could do well because of his interests and abilities.

   Lists and references for teacher:

   INTERESTS
   Outdoor
   Mechanical
   Computational
   Scientific
   Persuasive
   Artistic
   Literary
   Musical
   Social Service
   Clerical

   ABILITIES
   Verbal comprehension
   Reasoning
   Number ability
   Space ability
   Mechanical comprehension
   Clerical speed and accuracy
   Physical skills
   Manual dexterity
   Creative ability
   Artistic ability
   Writing ability
   Musical ability
   Dramatic ability
   Persuasive ability

   Byrne, John and Katherine, You and Your Abilities, SRA
   Paulson, Blanche B., Discovering Your Real Interests.
   Kuder, Frederic and Paulson, Blanche, Exploring Children's Interests.
   Bailard, Virginia, Your Abilities.
   Career-Planning Guide, World Book Ency., Merchandise Mart Plaza, Chicago, Illinois

2. Each child may list those things of a physical nature which he can do well, i.e. running, jumping, throwing, etc. He may make a second list of possible occupations for which these skills would be necessary. Teacher may help students see that every individual has a unique set of abilities, the combination of which presents many occupational possibilities.

TOPIC XV

CAREERS CULMINATION

ACTIVITIES

1. Children may examine their career notebooks to find out what careers they have learned about, which they knew little or nothing at the beginning of the school year. They may relate what they have learned in informal sharing periods -
   a. What they have learned about the world in general
   b. Various occupations in particular

2. Class may play Concentration using occupation and tool cards turned upside down. Points scored -
   a. match appropriate tool and occupation card
   b. state name of occupation
   c. tell how worker uses that particular tool in his work

   (Occupation and tool cards, Peabody Language Devel.Kit, Level #2.

3. Children may be given list of open ended sentences regarding concepts they have learned during year. How they respond will determine the gain in understanding and what is important to them.

   a. People need to cooperate in many occupations because:_______
   b. A worker needs to know about supply and demand because:_____
   c. Some people move because_________
   d. I see myself twenty years from now as a _______
   e. I am going to school because_______
   f. One of the things I need to know about the world of work is _________
   g. People work because________

4. Children may match brief descriptions of various occupations studied throughout the year with occupational titles. This technique will evaluate factual knowledge gained by students.

   a. Auto mechanic
   b. Auto salesman
   c. T.V. Announcer
   d. Math Teacher
   e. Stewardess
   f. Co-pilot
   g. Purser
   h. T.V. News Director
   i. Riveter
   j. Roustabout
   k. Lumberjack
   l. Sports cartoonist

   A. Saves swimmer from drowning and gives first aid.
   B. Repairs oil field equipment unscrews pump rods
   C. Uses a hammer and a machine to fasten pieces of metal together.
   D. Works in the forest and cuts down trees.
   E. Draws cartoons to show important sports news.
   F. Serves meals, sandwiches to passengers riding on airplane.

TOPIC XV

ACTIVITIES (Continued)

m. Lifeguard
n. Athletic trainer
o. Camp director

G. Tells about different programs, interviews guests, tells people about news.
H. Sells cars to people.
I. Fixes cars so people can drive them.
J. Show students how to use numbers.
K. Aids the pilot in all flying activity, keeps flight records, instrument readings, relieves pilot.
L. The number one flight attendant who keeps records and sees that passengers are comfortable.
M. Massages parts of players' bodies to relieve soreness, strain and bruises.
N. Plans recreational activities, hires and supervises camp staff.
O. Plans and prepares news for T.V. announcers.

5. Teacher may present short paragraphs depicting problem situations which the students are asked to solve on the basis of what they have learned throughout year.

6. Children may complete exercise indicating their understanding of terms used throughout the year.

TERMS

a. Careers
b. Cooperation
c. Needs
d. Abilities
e. Interests
f. Services
g. Specialization
h. Interdependency
i. Technology
j. Supply
k. Demand
l. Job
m. Physical demands
n. Job family
o. A vocation

____A person's lifework
____To furnish something needed
____Dependent on one another
____Working together
____Occasional occupation
____Anything a person does which serves a useful purpose.
____To give or furnish something needed
____Skills-being able to do something.
____To have need for
____To have an urgent or essential use for something.
____Jobs that are related
____To have a liking for something
____To concentrate on one activity.
____The application of science and of technical advances in industry, manufacturing, commercial arts.
____Strength required to do a certain job.

GRADE 6

TOPIC I

Individuals differ in their abilities, interests, aptitudes, and values. Individuals are qualified to perform in many different occupations.

QUESTIONS

Teacher may present a series of sets of objects and ask children to write down which object they would prefer and reject without revealing their answers to their peers. Teacher may ask the following questions:

a. Which color do you like best?
   Which color don't you like?
b. Which shape do you like?
   Which shape don't you like?
c. Which material has the best "feel"?
   Which one doesn't "feel" good?
d. Which tool would you prefer?
   Which tool don't you like?

By comparing various answers children can see that they have different likes and dislikes.

MATERIALS

Sets of objects

a. sheets of various colored construction paper.
b. cut out shapes on tagboard (square - circle - triangle, etc.)
c. small pieces of a variety of materials on tagboard (sandpaper, fur, glass, silk, burlap, etc.)
d. Variety of objects on baking tin (scissors, chalk, ruler, pencil, compass, etc.)

ACTIVITIES

1. Teacher presents pictures of four children - 2 boys, 2 girls She may relate following description as she holds up each picture:
   a. John is great in science and gets A's on his report card nearly all the time.
   b. Sally has artistic ability which enables her to sketch, draw, and paint pictures that everyone enjoys.
   c. Sam is the captain of the basketball team and has a dead-eye for the basket.
   d. Debbie is one of the best liked girls in school. She is friendly to everyone in school.

   Class may discuss:
   1. What abilities to the four children have?
   2. Why are there many types of abilities?
   3. Why is it important for a person to know his abilities?

TOPIC I
ACTIVITIES (Continued)

2. Class may develop a bulletin board around idea of various abilities individuals have.
   SAMPLE: WHAT ARE YOUR ABILITIES?

   CREATIVE MUSICAL PERSUASIVE CLERICAL WRITING
   MENTAL PHYSICAL SCIENTIFIC MANUAL ARTISTIC

   To assist self-understanding of aptitudes, students may complete check list to help them discover strengths and weaknesses.
   SAMPLE CHECKLIST: WHAT CAN I DO?

	Very Well	Pretty Well	Not so Good
a. Team Games	____	____	____
b. Swimming	____	____	____
c. Art	____	____	____
d. Music	____	____	____
e. English	____	____	____
f. Science	____	____	____
g. Writing (stories, poetry)	____	____	____
h. Tennis	____	____	____
i. Home chores	____	____	____
j. Memorizing	____	____	____
k. History	____	____	____
l. Earn spending money	____	____	____
m. Work with my hands	____	____	____
n. Work out problems through reasoning	____	____	____
o. Work well with others	____	____	____
p. Other	____	____	____

   Individual careers folders may be started with information about abilities included.

3. Small committees of two or three may be formed to discover the many occupations associated with one of the abilities listed in previous activity. Occupations may be listed on tagboard under ability headings. Class will want to discuss various occupations and importance of abilities to the various occupations. They can discover that many occupations require more than one ability.

RESOURCES

1. Humphreys, Anthony, Choosing Your Career, SRA.
2. Edgerton, A. M., A Career-Planning Guide, World Book Ency.

TOPIC I (Continued)

Children will want to add to their career folder list of occupations which might suit them because of their various abilities. Teacher may discuss:

1. How many occupations are listed under more than one ability heading?
2. Why are some occupations listed several places?
3. Suppose a person has musical ability and creative ability, what effect would this have on his career possibilities?

TOPIC II

Information about careers is needed by all individuals.

QUESTION

Teacher may ask students to relate how language arts may be used as tools to obtain information regarding careers.

ACTIVITY

Class may list ways of gathering information under appropriate language arts heading.

SAMPLE:

a. LISTENING

1. tape recordings
2. records
3. work sounds
4. films
5. filmstrips
6. workers' talk

b. SPEAKING

1. interviews
2. role playing
3. skits
4. debates
5. discussion
6. oral reports

c. READING

1. career books
2. work kits
3. library books
4. magazines
5. newspapers
6. textbooks
7. pamphlets
8. occupational briefs

d. WRITING

1. letter
2. write news articles
3. write want ads
4. career note books
5. preparing graphs and charts
6. making scrap books

Class will want to discuss importance of competency in all four language arts areas.

Each child may select one of the techniques listed in activity and employ said technique in investigating one of the careers associated with language arts. Each child should find out as much as he can about the selected occupation through use of technique he chose.

TOPIC II (Continued)

SAMPLE INFORMATION FORM:

1. Name of investigator
2. Language arts skill used to obtain information
3. Was the technique used in gathering information effective?
4. Would it have been helpful to use more than one language arts technique?
5. Name of occupation investigated.
6. Usual duties of occupation
7. Preparation necessary for occupation
8. Working conditions
9. Advantages of occupation
10. Disadvantages of occupation

Each child may add completed informational form to his career folder. Include:

a. People need information about careers because________________

b. People need to (speak, work, read, listen) well because________

TOPIC III

Interaction with workers help improve knowledge about careers.

QUESTION

Teacher may introduce the word interaction and ask students to find the word in the dictionary. Class may discuss what the word means and use it appropriately in oral sentences.

ACTIVITY

Class may do diagrams, cartoons, etc., showing interaction. Also play acting, short stories, etc.

RESOURCE

Filmstrip: "Observing Fundamentals of Thinking Series", Eye Gate House, Inc.

TOPIC IV

Observation of people at work helps improve knowledge about careers. In many careers, cooperation among workers is essential. Class may discuss the fact that careful observation requires thinking while looking.

QUESTIONS TO DISCUSS

1. Can you see cooperation?
2. Can you observe cooperation among workers?
3. Why could it be important for a person to be a good observer?

ACTIVITIES

Class may visit bookkeeper and surveyor to carefully observe work involved in these occupations. How do they cooperate with other workers?

Class may compile material for a graph by conducting a survey of workers in the community. Each child may interview four workers.

SAMPLE SURVEY FORM:

a. Name of occupation__________________
b. Do you use math in your work?________
c. Can you do your work without some type of math?______
d. Do you need to observe carefully in your work?_______
e. Do you cooperate with other people in your occupation?_______

Graphs, charts, survey information can be added to career folders.

RESOURCE

Widening Occupational Role Kit, SRA

TOPIC V

Technological and sociological changes eliminate and create jobs. Supply and demand help career choice

QUESTIONS

Teacher may present the following cause and effect relationships and ask students to make suggestions as to the missing part. Teacher may have to explain terms.

SAMPLE

a. Effect - John Greene has been an elevator operator for twenty years. He takes great pride in his work. His elevator is always

TOPIC V

QUESTIONS (Continued)

spotless and he tries not to stop the elevator suddenly so that the people he takes up and down will not be jarred. But one day John Green doesn't have a job anymore. What could be the cause for this?

Related filmstrip - Evolution of Harvesting,
Detroit Visual Education Consultants

b. Cause - A scientist discovers a way to harness and use the tremendous electrical power generated in a bolt of lightening. To do this he had different kinds of machinery which has thousands of separate parts which have to be carefully assembled. What is likely to be the effect on occupations? Through discussion the class should be able to see that science is frequently a cause which affects work and workers.

ACTIVITIES

1. Class may view film depicting some of the changes that have occurred in our society. Class may discuss the scientific causes resulting in change and its influence on careers.

   Filmstrip - "Our Changing World", Dept. of Education, San Diego County, Audio-Visual Service, Henry R. McCarty, Director, San Diego, California

   Class may discuss the scientific causes resulting in change and its influence on careers. How do discoveries in science effect technology.

2. Each student can interview one worker who has been in his occupation at least ten years to find out how technology and scientists have changed his work.

   SAMPLE INTERVIEW FORM:

   a. Interviewer ______________________________
   Date ____________________
   b. Name of occupation ____________
   c. Number of years in present occupation __________
   d. Duties ________________________
   e. Working conditions ____________
   f. Is your work any different than it was ten years ago? ______
   g. How is it different? ____________
   h. Do you use equipment or tools that are different from what you used ten years ago? ____________
   i. What has made the differences:
      1. Inventions _________
      2. Scientific discoveries ______
      3. Technological improvements _________

TOPIC V

ACTIVITIES (Continued)

- j. Is your work easier for you to do than it was ten years ago?__________
- k. Why or why not?_________

3. Children may read and report orally on variety of books on scientists and inventors who have had an impact on our lives.

RESOURCE MATERIALS

1. Occupational Brief Widening Role Kit, SRA, Grades 6-9
2. Career Index - 1967-68, Chronicle Guidance Pubs., Moravia, N.Y.
3. Handbook of Job Facts, SRA
4. Buehr, Walter, Underground Riches: The Story of Mining, Morrow, 1958.

TOPIC VI

Geographical location determines kinds of work found therein. Individuals live in a particular geographical location due to the nature of their work.

ACTIVITIES

1. Class may divide into committees to explore work and occupations found in the countries studied during the year. Each committee may select one country to find out:
   - a. industries
   - b. resources
   - c. associated occupations
   - d. jobs similar to those in the United States
   - e. jobs dissimilar to those in the United States

   Free material available to teachers from embassies (located in Washington, D.C.) of the following countries.

   Austria
   Ceylon
   Egypt
   Finland
   Greece
   Iran
   Iraq
   Ireland
   Italy
   Korea
   New Zealand
   Pakistan
   Philippines
   Spain

2. Maps made with flags placed to show occupations of the country.

3. GAME. Each child draws slip of paper. He fastens the occupation slip in the appropriate place on a map and explains why he put it there.
   EXAMPLE:
   - a. This is a tugboat captain. He would likely live in a seaport city.
   - b. This is a corn farmer. He would live where the soil is rich and the climate is mild.

TOPIC VI

ACTIVITIES (Continued)

4. Students may write short report on following:

   If I lived in (name of country)___________, I would like to be a (name occupation)___________ because ___________________.

   Reports may be shared and put in career folders.

5. Class may invite individual who has traveled abroad to speak to them about workers they have observed in other countries.

6. Class may compare and chart occupations of long ago and current.

RESOURCE MATERIALS

Filmstrips:
- a. Italy Today
- b. Japan Today
- c. Switzerland Today
- d. France Today
- e. Ireland Today
- f. Korea Today

Visual Education Consultants, 2066 Helena Street, Madison, Wisc.53701

Films:
- a. The Danube, Valley and Its People, 14 min.
- b. Poland, Land Under Communism, 22 min.
- c. Hungary and Communism, Eastern Europe In Change, 17 min.
- d. The Middle East, 14 min.
- e. Arabian Children, 16 min.
- f. Iran-Between Two Worlds, 15 min.
- g. Pygmies of Africa, 20 min.
- h. Iberian Peninsula, 11 min.
- i. People of Spain, 17 min.
- j. Spanish Children, 16 min.
- k. Italy-Peninsula of Contrasts, 17 min.
- l. Italian Children Harvest Time, 11 min.
- m. Venice, Queen City of the Adriatic, 11 min.
- n. People of Greece, 14 min.

Encyclopedia Britannica, Educational Corp.

TOPIC VII

Teacher may introduce the work with a bulletin board showing the proportion of time per day an individual spends doing different things. Class may discuss how much time per day they spend sleeping, working, or going to school. Through discussion children can be led to see that activities done in remaining time are labeled - Leisure Time Activities.

TOPIC VII (Continued)

ACTIVITIES

1. Class can make a list of activities they do when they are not in school or asleep. List may be kept in career folder.

   Class may circle those activities that might come under heading hobbies for further exploration. Teacher will want to help class see relationship between hobbies and occupations.

   You choose a hobby in something that interests you. You like to work at it and plan it out yourself.

   You choose an occupation similarly in a field that interests you. You hope to succeed in it, even though you very likely must carry out somebody else's ideas and plans.

   Chief difference - a hobby is something you carry on in your own spare time without any thought of pay or reward. An occupation is something in which you exchange your services during regular hours for money.

2. Class may interview parents or other workers. Discuss and summarize.
   SAMPLE QUESTIONNAIRE FORM:
   a. Name of occupation_____________
   b. What did you like to do when you were my age?_________
   c. What hobbies did you have when you were young?________
   d. Do you think that the hobbies and interests you had when you were my age had any influence on your choice of an occupation?____________

3. Class can define fine arts. List hobbies associated with the fine arts (music, drama, dance, painting, drawing, sculpture, architecture). Students can locate hobbies in chart and discuss career possibilities associated with each hobby.

   a. Artificial flower making
   b. Dancing
   c. Dramatics
   d. Drawing-sketching
   e. Cartoon
   f. Etching
   g. Hand carfts
   h. Interior decorating
   i. Leather working
   j. Linoleum block printing
   k. Literature
   l. Mechanical drawings
   m. Model making
   n. Clay modeling
   o. Music
   p. Decorative painting
   q. Photography
   r. Public speaking
   s. Toy making

Filmstrip: "What Do You Like To Do?" Society for Visual Education.
Book: The Boy Mechanic, Popular Mechanics Press, Chicago 1945
(See up-dated books in library.)

TOPIC VIII

Career choice affects the individual's total life-leisure time activities.

QUESTIONS

Will future years bring more, less, or same amount of leisure time?

Class may invite a speaker whose work is centered around providing leisure time activities for people.

1. record store salesman
2. hobby shop owner

Discuss leisure time pursuits as a means of:

1. self-expression
2. a safety valve
3. developing skills
4. developing appreciation

Discuss "Moonlighting" and Unemployment Insurance

TOPIC IX

Careers are of wide variety and may be grouped by job families

QUESTIONS

Teacher may review and ask:

1. How many occupations can you name?
2. How many occupations do you suppose there are?
3. How many careers can you receive complete or partial training for in our school?

(Class may conclude that there are many different kinds of occupations and that schools provide training for many of them.)

Class can examine the Dictionary of Occupational Titles, Volumes I and II to discover the wide variety of jobs present in the United States. Each student may want to select one occupation about which he knows little or nothing and read the job description. Also, Widening Occupational Roles, SRA, may be used.

Class may review the term "job families" and various ways of grouping occupations. Teacher should explain that one way of grouping jobs is by categories of Data (ideas), People, and Things.

TOPIC XI (continued)

While few jobs can solely fit only one category, many jobs fit one of the categories better than the others.

ACTIVITY

Each student can interview his parent(s) in regard to classification of his and/or her occupation(s) according to the people, idea, and thing classification system. Teacher may explain that in many careers the worker needs aptitudes and interests in more than one area to be successful and happy in that job. Therefore, it is wise for a person to know as much about himself as possible prior to entering a career field.

SAMPLE QUESTIONNAIRE:

a. Name of occupation________
b. Requirements for occupation________
c. Training__________
d. Do you work with:
    1. People____
    2. Ideas_____
    3. Things____
e. In what way(s) do you work with the above?_____________

TOPIC X

Individuals work to meet personal and social needs.

QUESTIONS

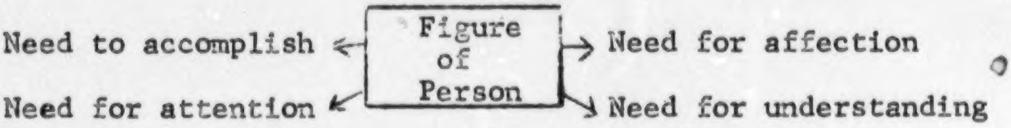
Panel of workers associated with health and physical education may be invited to discuss:

1. What do you do?
2. What personal qualities are required?
3. What kind of training is necessary?
4. Why do you think your job is important?
5. What personal satisfactions do you receive from your job?

ACTIVITIES

1. Teacher may develop a transparency depicting the personal needs of all people. Each section of transparency can be uncovered and explained to students relating incidents as to how people strive to meet personal needs in various ways.
   SAMPLE TRANSPARENCY

EVERYONE HAS NEEDS



TOPIC X

ACTIVITIES (Continued)

2. Each student can select one of the following. Write a paragraph attempting to prove or disprove the statement.
    1. Money is the only reason for working.
    2. Money can buy happiness.
    3. The need to accomplish can sometimes be met in a career.
    4. I don't care if anyone understands me or not.
    5. A health career can satisfy personal needs.

    Above paragraphs can be shared with class and added to career folders.

TOPIC XI

Individuals' value systems affect career choices.

MATERIALS

Box containing assorted objects: baseball glove, tennis ball, phonograph, girl's purse, candy bar, book, shoes, bar of soap, paint set, etc.

ACTIVITIES

1. Teacher may hold up each object for class to see. Have each student write down the one object they would prefer if they could choose one. Write brief paragraph explaining why they chose that one. Through class discussion students should be able to understand that their choices were determined by what is important to them....what they value. Students may need to define the word value. Have them use the work in a variety of sentences until they become comfortable with it.

2. Given situations - open ended - discuss what values may take over in situations of conflict.

QUESTIONS

Class may discuss:
1. What factors help a person decide on an occupation?
2. How can a person's set of values help determine career choice?
3. What jobs might an individual consider if power was very important to him?
4. What jobs might an individual consider if wealth was very important to him?
5. What jobs might an individual consider if the respect of others was extremely important to him?

TOPIC XI

ACTIVITIES (Continued)

3. Children can select one of the accompanying human values and relate it to careers which said value might lead to:........ (These reports can be written and placed in individual career folders).
    a. affection - liking others, friendship, love.
    b. respect - looking up to certain people.
    c. power - making decisions and influencing others
    d. wealth - having goods, clothing, toys, food - services such as mothers' or teachers' help in learning or the mechanic's repair of your bicycle.
    e. enlightenment - knowledge about important things.
    f. skill - ability to use one's muscles well, to think clearly, to talk, read, write well, to get along with people, to enjoy beautiful things.
    g. well-being - having good health, feeling well, being happy.

TOPIC XII

CULMINATION AND REVIEW

Teacher may write the word WORK on the board and ask the students to name the first thing that pops into their heads. Their responses will indicate those areas studied throughout the year which have had the most significance to them.

Each student can describe the career investigated during the school year which appealed to him the most and explain why he or she might like this kind of work.

Class may have a hobby show. Each child may display and explain his hobby and relate careers which his particular hobby could lead to.

Evaluation of sixth grade career development program involves four broad areas:
1. understanding of concepts in relation to the world of work.
2. attitudinal formation.
3. information
4. self-appraisal.

ACTIVITIES

1. Teacher can give each student a list of the concepts studied during the current school year. (see scope and sequence chart-grade six)

    Students may look at cartoon type pictures and supply captions and concepts. (see SRA for pictures).

TOPIC XII

ACTIVITIES (Continued)

2. Teacher may present each student with list of occupations both at beginning and end of school year. Students may be asked to rank the occupations according to their importance and state reasons. List of occupations may include:

   a. engineer
   b. farmer
   c. music librarian
   d. auctioneer
   e. radio announcer
   f. actor
   g. lawyer
   h. accountant
   i. bookkeeper
   j. surveyor
   k. textile worker
   l. carpenter
   m. roustabout
   n. secretary
   o. meat inspector

3. Teacher may give students a series of open-ended statements and ask class to complete sentences with their own opinions. There are no wrong or right answers.

   Following sample statements may be used:
   a. I would select an occupation on the basis of______________
   b. I am like other people in that I_________________________
   c. I am different from other people in that I______________
   d. Work is____________________
   e. To learn about an occupation I need to___________________
   f. _______________________ is important to me.

4. Teacher may give each student a list of careers selected at random. Students should group the occupations into three job families and title the groupings in such a way as to indicate how the jobs are related. They are to omit any occupational titles that do not fit the groupings they have chosen. Teacher can determine: a) knowledge of job families
   b) understanding of work characteristics.

   The following career titles may be used for the above suggested activity:

   a. photographer
   b. chemist
   c. florist
   d. accountant
   e. waiter
   f. pilot
   g. engineer
   h. bricklayer
   i. mortician
   j. roustabout
   k. fruit farmer
   l. teacher
   m. bus boy
   n. dancer
   o. cashier
   p. plumber
   q. artist
   r. dentist
   s. tree surgeon
   t. automobile mechanic
   u. dietician
   v. architect
   w. electrician
   x. jeweler
   y. bus driver
   z. meteorologist

   Teacher may end with Opinionaire:

   (suggested to begin and end all grades: THREE THROUGH SIX)

LIMITED LISTING OF RESOURCE MATERIALS

Widening Occupational Roles Kit	S R A
Job Family Series	S R A
Handbook of Facts	S R A
Focus on Self Development Kit	S R A
Being Me Spirit Masters	S R A
Career Education Resource Guide	General Learning Corp.
Foundations for Occupational Planning (Filmstrip)	S V E
Our Changing World (Filmstrip)	Dept. of Ed. San Diego County San Diego, Calif.
Careers: Exploration & Decision	Prentice Hall
Planning Career Field Visits	BOCES
Career Education: Resource Materials	State Ed. Dept. Division of Occupational Ed. Albany, New York